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FOUNDED BY EDWARD L. WILSON

MRS. EDWARD L. WILSON, Editor

T. DIXON TENNANT, Associate Editor

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No. 289 FOURTH AVENUE

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EMBELLISHMENTS.

January.—Frontispiece. By S. H. LIFSHEY, Brooklyn, N. Y. Engraved supplements from photographs by CURTIS BELL, BRADLEY STUDIOS, JOS. BYRON, E. B. CORE, BARRON FREDRICKS, H. HENDRICKSON, PIRIE MACDONALD, and MARCEAU, all of New York.

February.—Frontispiece. By J. H. LEONARD, Racine, Wis. Engraved supplements from photographs by S. HENRICKS, Murphysboro, Ill.; DIXON STUDIO, Dalhart, Texas; SCHREUR'S STUDIO, Chicago, and R. BAUMANN, Vienna.

March.—Frontispiece. By GILBERT & BACON, Philadelphia, Pa. Engraved supplements from photographs by GEO. M. EDMONDSON, Cleveland, Ohio; E. GOLDENSKY, Philadelphia, Pa.; E. F. HALL, Buffalo, N. Y.; GEO. H. HASTINGS, Haverhill, Mass.; H. H. PIERCE, Boston, Mass.; H. MISHKIN, New York, and J. SAVANNAH, Victoria, B. C.

April.—Frontispiece. By HOLLINGER, New York. Engraved supplements from photographs by O. P. HAVENS, Jacksonville, Fla.; A. T. PROCTOR, Huntington, W. Va.; NAST, Denver, Colo.; MINNS, Akron, Ohio; S. NEWMAN, New York; W. H. POTTER, Indianapolis, Ind., and F. B. CLENCH, Madison, Ga.

May.—Frontispiece. By M. A. BLAZIER, Lebanon, Pa. Engraved supplements from photographs by E. T. BILLINGS, Racine, Wis.; C. W. JEROME, Brookings, S. D., and F. FLODIN, Stockholm, Sweden.

June.—Frontispiece and four engraved supplements from photographs by SCOTT'S STUDIOS, London, England. Engraved supplements from photographs by MISS MARY CARNELL, Philadelphia, Pa.; VAN LOO STUDIO, Toledo, Ohio, and B. J. FALK, New York.

July.—Frontispiece and six engraved supplements from photographs by W. N. BRENNER, Cincinnati, Ohio. Engraved supplement by SEABROOK BROS., Charlottesville, Va., and WILHELM KUBELER, Darmstadt, Germany.

August.—Frontispiece and six engraved supplements from photographs by O. C. CONKLING, St. Louis, Mo. Engraved supplements from photographs by A. T. PROCTOR, Huntington, W. Va.; H. MISHKIN, New York.

September.—Frontispiece and three engraved supplements from photographs by HOLLINGER, New York. Engraved supplements from photographs by C. F. TOWNSEND, Des Moines, Iowa, and A. PIEPERHOFF, Halle a/S, Germany.

October.—Frontispiece from a photograph by GARO, Boston, Mass., and eight engraved supplements from photographs by R. DUHRKOOP, Hamburg, Germany.

November.—Frontispiece and five engraved supplements from photographs by MEREDITH JANVIER, Baltimore, Md. Engraved supplements from photographs by R. DUHRKOOP, Hamburg, Germany, and H. F. WALBRIDGE, Pittsburg, Pa.

December.—Frontispiece and an engraved supplement from photographs by ELIZABETH FLINT WADE and ROSE CLARK, Buffalo N. Y. Engraved supplements from photographs by J. C. STRAUSS, St Louis, Mo.; BRADLEY STUDIOS, New York; MRS. SARA C. SEARS, Boston, Mass.; RUTH TURNER PERRY, Paris, France; C. J. VON DUHREN, Berlin, Germany; AL. KOSEL, Vienna, and GOLIKE and WILBORG, St. Petersburg, Russia.

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LIST OF ILLUSTRATORS.

BAUMANN, R.—February
Bell, Curtis.—January
Billings, E. T.—May
Blazier, M. A.—May
Bradley Studios.—December
Brenner, W. N.—July
Byron, Jos.—January

CARNELL, M.—June
Clark, Rose.—December
Clench, F. B.—April
Conkling, O. C.—August
Core, E. B.—January

DIXON STUDIO.—February
Dührkoop, R.—October, November

EDMONDSON, GEO. M.—March

FALK, B. J.—June
Flodin F.—May

GARO.—October
Goldensky, E.—March
Golike—December

HALL, E. F.—March
Hastings, Geo. H.—March
Havens, O. P.—April
Henricks, S.—February
Hendrickson, H.—January
Hollinger, Wm.—April, September

JANVIER MEREDITH.—November
Jerome, C. W.—May

KOSEL, A.—December
Kubeler, W.—July

LEONARD, J. H.—February
Lifshey, S. H.—January

MACDONALD, PIRIE.—January
Marceau.—January
Minns.—April
Mishkin, H.—March, August

NAST.—April
Newman, S.—April

PERRY, ELIZABETH, T.—December
Pierce, H. H.—March
Pieperhoff, A.—September
Potter, W. H.—April
Proctor, A. T.—April, August

SAVANNAH, J.—March
Schreur's Studio.—February
Scott's Studios.—June
Seabrook Bros.—July
Sears, Mrs. Sara C.—December
Strauss, J. C.—December

TOWNSEND, C. F.—September

VAN LOO STUDIO.—June
Von Duhren.—December

WADE, E. F.—December
Walbridge, H. F.—November

INDEX.

ACADEMY, The, 3, 49
Album, a wonderful photographic, 177
Allan, Sidney, 25, 51, 73, 99, 129, 169, 217, 243, 251, 313, 361, 457, 494, 553
Amateur photography has affected the professional, how, 322
American photographs in London, 139
Amidol, development with, 86
Anderson, A. J., 543
Apprentices, plea for higher education of, 285
Archibald, D. G., 172
Aristo School of New York, 208, 477
Artistic lenses, 52
photographers, 223
Art in photography, 290
principles in portrait photography, 229, 313
study as a business investment, 468
Artura, Iris developing paper, 478

BAKER, T. THORNE, 75, 156
Barrows, F. R., 369
Bartlett, Jno., 184, 363, 377
Bas-relief effects, photographs with, 87
Bath, the fixing, 178
Beck, Otto Walker, 409
Beeby, J. E., 135
Bennett, H. W., 519
Bish, A. A., 285
Blisters on bromide paper, 569
Brady, John E., 4
Brenner, W. N., 299
Brigham, J. M., 185
Brigham, W. Foster, 37
Bromide, enlarging difficulties, 516
paper, blisters on, 569
practical notes on, 273
printing and developing, 561
Business end of photography, 315
Byron, Jos., 25

CARBON pictures, latitude in exposure and development, 255
printing, some observations on, 35
prints on artists' canvas, 267
on wood, 112
process, further notes on the, 325
tissue, sensitizing and keeping, 346
transparencies, 45
Carnegie, D., 108
Chair, the posing, 37
Chemicals, necessity of pure, 146
Chemistry of sulphide toning process, 108
Child model in commercial photography, 43
Children, photography of, 31
Claudy, C. H., 202, 294, 465, 539
Coburn, A. L., 181, 251
Collins, H. A., 442
Color photography, does it pay, 278
Lumière single plate process, 370
plates and screens, 156
Warner-Powrie process, 490
Colored photography, 232
Comparative portraiture, 129
Complete photographer, 93
Composition for beginners, pictorial, 84
Construction, hints on studio, 472
Convention critics, 369
Dayton, 385, 386
New York, 193, 194
picture, the, 289
Wisconsin, 280
Conventions and their methods, 241
educational, 62
news of, 124, 351
Coonley, J. F., 105
Copying designs, color plates for, 156
old and faded photographs, 558
Copyright law, the, 1, 82
League of America, 2, 181
Crane, Fred, 560
Cripps, E. C., 523
Croughton, G. Hanmer, 468
Curtis, E. S., 361

DAGUERRE'S first photograph, 79
Day of unrest, 297
Demachy, Robert, 536
Developing papers, gaslight, 75
Development for professional portraits, tank, 202
stand, 568
with amidol, 86
with pyrogallol, tank, 364
Developers in solution, preservation of, 270
Dykes, Robert, 327

EDITOR'S TABLE, 48, 96, 144, 192, 240, 287, 335, 384, 432, 480, 528, 576
Educational conventions, 62
Enlargements from flat negatives, 111
on textile fabrics, 102
Everard, John, 373
Exhibition of autochrome pictures, 482
Experiences of a professional photographer, 220
Exposures for autochromes, 489
Expression and light, 39

FABRICS, enlargements on textile, 102
Faded photographs, copying old and, 558
Fading of photographs, 338
Falk, B. J., 177, 484
Fell, H., 445
First photograph, Daguerre's, 79
Fixing bath, the, 178
the merits of separate toning and, 54
Flashlights, 25
Flashlight mixtures, 30
pointers, 32, 171
safe, 334
silhouettes, 77
Flower photography, 461, 508
Flowers, photographing, 188
Focal-plane shutter for studio work, 249

Focus in portraiture, pictorial, 253
Formulæ, methods and, 380
work-room, 430
Foxlee, E. W., 255, 346

GAMBLE, W., 52
Gaslight developing papers, 75
printing for beginners, 523
Gill, W., 278
Goold, James E., 60
Graflex camera for studio, the new, 448
Guest, Antony, 39

HARRIS, G. T., 364
Hassell, Geo., 568
Hearn, C. W., 49, 437
Herzog, F. Benedict, 553
Hewitt, C. H., 253
Hints on ozobrome, 80
on platinum, 80
on retouching, practical, 57
Histed, photographer, 457
History, a passage in ancient, 459
Hoppè, E. O., 505
Human, Ernest, 45
Hydrokinone, metol and its adaptability, 236
Hypo eliminators, 324

INGLIS, monument to the late James, 293
Intensification, mercurial, 323
of prints, 132
Intensifier, mercuric iodide, 521

JANVIER, MEREDITH, 494
Jarman, A. J., 33, 54, 102, 146, 267, 339, 513
Jones, Chapman, 270, 318
Judge, the photographic, 184

KALLITYPE, how a beginner works, 13
King, R. E., 101

LANTERN slide-making, 16
Lantern slides, multiple toning of, 159
Law of the picture, the, 4
Lenses, artistic, 52
Light, expression and, 39
Lighting, management of Rembrandt, 28
Line lighting, 30
Lively, W. S., 62
Lockett, A., 558
Lumière single-plate color photography, 370, 433, 483, 485, 486, 530

MAC DONALD PIRIE, 297
McIntosh, Burr, 99
McLean, Hector, 148
Manufacturers and dealers at the convention, 423
Manley, Thos., 474
Martin-Duncan, F., 159
Measuring shutter speeds, a simple method of, 301
Medlar, F. W., 482
Mercurial intensification, 323
Mercuric iodide as an intesnifier, 521
Methods and formulæ, 380, 572
Metol-hydrokinone and its adaptability, 236
Metropolitan Museum of Art, 81
Michaud, 9, 87
Miller, J Peat, 138
Miniature, the, 141
Mitchell, G. C., 555
Mitchell, S. A., 555
Model in commercial photography, the child, 43
Morris, G. E. C., 206, 236
Mortimer, E. J., 88
Mortimer, F. J., 35, 132, 178
Mountants for photographs, good, 33
Mounting, modern methods, 148
Mounts, home-made plate sunk, 304
Multiple toning of lantern slides, 159

NATIONAL Academy of Photography, 3, 49
National Association, 249, 251, 291, 387, 481
Negative-making in portraiture, 7
varnish, a cold, 293
New York, Professional Photographers' Society of, 193, 194
News and Notes, 79, 111, 188, 382
News of the conventions, 124, 189, 238
Night photography, 327

OBSERVATIONS on carbon printing, 35
some, 299
Oliver, W. F., 152
One-print exhibition, the, 217
Outlook for 1907, 3
Ozobrome, 225
hints on, 80
Ozobromes, how I make my best, 474

PAINTERS and the public, 51
Painting prints, 189
Papers, gaslight, 88
gaslight developing, 75
Payne, Arthur, 301
Penrose Pictorial Annual, 93
Photo-secession, 181
Photograph in business, 101
Photographer, the successful, 283
Photographers' Association of America, 97, 249 251, 385, 386
of Canada, 424
of Indiana, 424
of New England, 436
Photographers, English and American, 445
Photographing against the light, 543
flowers, 188
Photographs, on the fading of, 338
with bas-relief effects, 87
Photography and the stage, 60
colored, 232
flower, 461
for the press, 373
night, 327, 349
voice, 112
Pictorial composition for beginners, 84
focus in portraiture, 253
photography in France, 536
Picture, the law of, 4
Piper, C, Welborne, 86
Planets are photographed, how the, 555
Plate-sunk mounts, home made, 304
Platinum hints, 80
paper, bright prints on stale, 363
residues, recovery of, 137

Plea for more variety, 529
Portrait out of a likeness, how to make a, 409
photography, modern, 505
Portraiture, comparative, 129
negative-making in, 7
Posing chair, the, 37
Rodin on, 345
thoughts on, 185
Post-card, the picture, 341
Post-cards for profit, 172, 182
sensitizer for, 188
Preservation of developers in solution, 270
Printing, bromide, 561
gaslight, 525
practical notes on bromide, 273
some observations on carbon, 35
Prints, intensification of, 132
Prize contest, Eastman kodak professional, 321
Proctor, A. T., 169
Professional Photographers' Society of New York, 81, 121, 122, 124
Pure chemicals, the necessity of, 146
Purity of sodium, carbonate and sulphite, 318
Pyro, how I use, 127

RAYMER, FELIX, 265, 343
Reception-room, the, 78
contrasts, 539
Recognition, 152
Reducer, an excellent, 560
Reflections, 343
Rembrandt, lighting, management of, 28
Reply to Sidney Allan's criticism, 525
Residues, recovery of platinum, 137
Retouching, practical hints on, 57
Ridpath, J. W., 84
Rodin on posing, 345
Rodinal, 323
some notes on, 206
Rushing work, 513

SALTS of copper as a printing medium, 377
San Francisco Relief Fund, 94
Sartain, Samuel, in memorial, 142
Sensitizer for post-cards, 187
Separate toning and fixing, the merits of, 54
Seymour, Edward, 461
Sharp prints through glass, 138
Shutter, a new photographic, 126
efficiency of a, 378
Shutter speeds, simple method of measuring, 301
Silhouettes, flashlight, 77
Single print, the, 145
Single prints vs. dozen lots, 386
Skylight, under the, 265
Somerville, W., 516
Stage, photography and the, 60
Stand development, 568
Sterry, J., 561
Studio construction, hints on, 472
Sulphide toning process, chemistry of, 108
Sutcliffe, F. M., 322
System, 425

TANK DEVELOPMENT, 203
with pyrogallol, 365
Teeth in photography, 135
Toning and fixing, the merits of separate, 54
bath, 300
lantern slides, 159
process, chemistry of sulphide, 108
Townsend, A. C., 315
Trade notes, 47, 95, 143, 191, 239, 287, 334, 383 431, 479, 526
Transparencies, carbon, 45

VARNISH, a cold negative, 293
dead black, 64
for platinum prints, 176
watertight, 180
Veteran's note book, pages from, 105
Voice photography, 112

WAIDE, M., 73
Walpole, Margaret, 14
Warner-Powrie color photography, 490
What are you in it for, 367
Wisconsin, Photographers' Association of, 280
Wood, carbon prints on, 112
Woodbury, Stephen, E., 127
Work, rushing, 513
Workmen, necessity of better, 465
Work-room formulæ, 430, 572

T. DIXON TENNANT

Associate Editor Wilson's Photographic Magazine

By S. H. Lifshey, Brooklyn, N. Y.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
L. W. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV. JANUARY, 1907. No. 601

THE AMERICAN PHOTOGRAPHER AND THE COPYRIGHT LAW.

EQUAL rights to all: Privileges to none: either means all that the English language implies or it is merely a high sounding platitude.

The Copyright League of America after years of patient labor has almost succeeded in getting a copyright law before Congress securing to the photographer a just and fair recognition of his property rights.

At the last minute an audacious attempt is being made by the newspaper proprietors to fasten on to the bill an amendment which, if accepted, will rob the photographer in a most outrageous manner of the right to his own property —the Declaration of Independence notwithstanding.

Will the American photographer stand aside while his property is taken from him? We do not think so.

It is imperative that each and every photographer demand—and at once, that there shall be no discrimination.

He is entitled to and must insist on the same protection for his work that is accorded to the work of a Sargent, an Edison, or a Mark Twain.

That which he has made is his own and he demands the fullest protection the law affords.

Every other civilized country recognizes the photographer and gives him the same protection as is given to all other producers in art, science, and literature.

The American photographer cannot take less.

To strengthen the hands of the Committee which has charge of the bill, he must, after reading President Falk's letter, sit down and write to his Senator and Congressman demanding their support for the new copyright bill *unchanged*.

Delay may be fatal. Act today. Let everything else wait. There is nothing that can excuse you from your plain duty.

You owe it to yourself and your craft to see that the photographer is treated as a man and not as a nonentity.

It is only by strong and immediate action that this injustice can be averted. "Tomorrow" will be too late. Take pen and ink and write to your representatives now. Protest strongly against any change being made in the *photographic* section of the new copyright bill. It does not contain anything more than you are entitled to: To accept anything less will be an unjust discrimination against yourself and your profession.

A LETTER AND AN APPEAL FROM B. J. FALK, PRESIDENT OF THE PHOTOGRAPHERS' COPYRIGHT LEAGUE OF AMERICA.

PHOTOGRAPHERS' COPYRIGHT LEAGUE OF AMERICA.

NEW YORK, December 21, 1906.

Editor, WILSON'S PHOTOGRAPHIC MAGAZINE,
New York City.

DEAR SIR: I promised to notify you of copyright matters when the time came. It has come. The late developments of the copyright situation call for quick action on the part of all photographers of the country to prevent their property rights in their productions from being interfered with, or perhaps filched from them altogether. If our press can stir them up to write to their Senators and Congressmen, *without delay*, protesting against changing the photographic provisions of the new Copyright Bill, which, as they now are, will give us fair protection, much harm may be averted.

The enclosed circular letter which was sent out a few days ago tells its own story. Since it was written, the newspaper people have entered a protest against the existing law being changed as it relates to photographs. A few days later they sent in an amendment reading as follows:

"Provided, however, that the reproduction of a photograph in any newspaper by the process known as stereotyping shall not be construed as an infringement of the copyright of such photograph."

Of course, this is *the limit*. There is to be no more privacy, no more property rights in photographs. While every civilized nation on the globe recognizes the work of the photographer and gives it the same protection as the work of other producers, these people demand that our country shall legislate our rights out of existence as far as newspapers are concerned. Please publish the enclosed appeal and proposed amendment and write as strong an editorial as you know how.

Yours very truly,
B. J. FALK.

P. S.—Will send you some more matter very soon. *The fight is now on.*

TO THE PHOTOGRAPHERS OF AMERICA:

This is *not* an appeal for money.

From Friday morning, December 7th, until yesterday noon the Joint Patent Committee of Congress have been hearing the opponents of the New Copyright Bill.

The New Bill if adopted by Congress *in its present form* will give us some measure of protection against infringers, who now transgress without fear of punishment.

The Committee will probably report the Bill within a few days either as it is, or changed.

We want it as it is, without alteration.

This Bill has taken over a year to prepare and every item in it was carefully discussed, frequently vigorously opposed, but finally adopted by a majority or unanimous vote of the Conference.

Your delegates attended all the Conferences and Hearings both here and in Washington, asking for nothing but a just and fair provision for the protection of photographic properties.

The time has arrived when YOU can help.

Write a strong letter to your U. S. Senator and your Congressman, care of Capitol, Washington, D. C.

Write demanding their support for the New Copyright Bill, *unchanged*.

Tell them in your own way what it means to have your work at the mercy of anybody who wants to use it for his own profit.

Make clear to them that while this Bill does not treat us as well as photographers in many European monarchies are treated—still it would give us fair protection and, *as a whole, we are satisfied with it*.

The Legislative Committee of the League has gladly given time, thought, labor, to bring the matter to this point—now it is up to you to do YOUR share.

Write now, or the opportunity to help yourself and the whole craft may be lost forever.

Fraternally yours,
B. J. FALK,
President.

THE OUTLOOK FOR 1907.

BY THE EDITOR.

THE following remarks on the unparalleled prosperity of this country, attributed to Sir Thomas Lipton, have much significance for every professional photographer.

"Everybody in America is making money, and in such piles that the ordinary standards of comfort and luxury are being replaced by new ideals. American prosperity is based upon the immense expansion of solid industries, the increasing purchasing power of the people, and the legitimate development of agriculture and mining industries, while the general confidence is such that nobody is afraid to spend lavishly."

Photography being in the nature of a luxury, must necessarily enjoy the greatest prosperity "while the general prosperity is such that nobody is afraid to spend lavishly."

The year that has just closed has been unparalleled in its prosperity. The present year of grace opens with every sign of a continuance of this wonderful prosperity.

The photographer should be prepared to take the fullest advantage of this happy state of affairs—he needs it, for he will be the first to feel the effect of the receding wave when the high water mark has been reached.

This is the time when he should be wiping out old mortgages, renewing and improving his equipment, and not forgetting to add all he possibly can to that surplus which is going to be the support of his old age, or his best friend in times less prosperous than those we are now enjoying. He must see that he gets the highest possible price that the quality of his work will command. Good work means good prices and good prices mean more money for less work.

The outlook for the year 1907 is a bright one for the professional photographer. Let us all be up and doing, ever remembering that a pendulum swings two ways even though it may make a long and steady upward swing.

The motto for the year should be "More and better work."

THE ACADEMY.

THE Editor of the *Photo-Era*, who launched the Academy idea at the Niagara Falls Convention, takes exception to our deductions from the replies of the hundred representative photographers to our questions on the Academy idea or rather to the lack of replies from some of our most prominent photographers. He volunteers the opinion that being busy men they possibly did not have time to formulate their views for the editor of this magazine.

The *Photo-Era* then hastens to assure us that with possibly two exceptions it has received assurances favorable to the idea from all the gentlemen mentioned in our November issue, and that it *believes* that they will welcome the establishment of an Academy with open arms.

That our assumption that the silence of the gentlemen mentioned implied opposition was not "entirely gratituous and unfounded" is shown by the fact that at a meeting of the Continental Camera Coterie, held in Buffalo, on

October 29, the following members were present: Hall of Buffalo, Rinehart of Omaha, Goldensky of Philadelphia, Edmondson of Cleveland, Janvier of Baltimore, Koehne of Chicago, Stein of Milwaukee, Macdonald of New York, and Strauss of St. Louis it was *unanimously* resolved that the club disapprove of the proposed Academy idea on the lines it is now proposed.

Our only contention was that it would be useless to try and establish an Academy without the cordial support of the foremost men in the craft. The *Photo-Era* only *believes* that they would welcome the idea with open arms. We have their official notification to the contrary.

We are glad to know that *Photo-Era* thinks that the Academy idea was advanced by our symposium on the question—that was our intention. We can only repeat what we said in the November issue "We are emphatically in favor of any scheme that will advance the professional photographer in the public estimation." If, as our esteemed contemporary asserts, the leading men in the craft are ready to welcome the Academy with open arms, then its success is assured and we will be glad to lend it our active support. We are afraid, however, that the editor of the *Photo-Era* has recently joined an "Areo" club and has been indulging in some ariel flights.

THE LAW OF THE PICTURE.

BY JOHN E. BRADY.

[THE following article on "How, When, and Where it is Safe to Print a Portrait without Consent," of great interest to every professional photographer, appears in the December issue of *Profitable Advertising*, Boston, Mass. We reprint it for the benefit of our readers.—ED. W. P. M.]

The development of every great industry is always a source from which flow many legal doctrines and rules of law. For instance: The construction of the railroads makes necessary volumes of legislation and is the occasion of a never-ending and constantly increasing flood of judicial decisions. And, although the automobile is now in its very infancy, every one of the United States has upon its statute books as many enactments concerning the conduct and government of that machine as it would seem possible for its legislature to devise.

At least one doctrine of law, not to mention a considerable number of statutes, may be laid at the door of advertisers who were too aggressive in their methods of bringing their product to the public notice: The doctrine that every individual has a right to enjoy privacy and to be let alone. An examination of the authorities down to the year 1890 would not disclose the mention of such a right. Since that date the argument of its existence has frequently been advanced, but it has remained for the Supreme Court of the State of Georgia (in a case decided recently, which will be referred to later) to declare that such a right does exist.

Prior to that decision it would seem that anyone might, for advertising or other legitimate purposes, make use of the photograph of any individual, whether living or dead, provided that the photograph was not protected by copyright and that its use did not constitute a libel, or involve an invasion of some property or contract right.

A case which aptly illustrates this proposition was brought up in Michigan, in 1899, and involved the use of the picture and name of Col. John Atkinson, a well-known lawyer and politician of Detroit. Immediately after his death a manufacturer of cigars brought out an article which was named the "John Atkinson cigar," and sought to place it upon the market under a label bearing the name and a likeness of Colonel Atkinson. The widow filed a bill in equity to restrain what she deemed an unwarranted and wanton invasion of her rights. While the Court sympathized deeply with the annoyance felt by the complainant, and appreciated "the indelicacy of the man who should join the funeral procession of Col. John Atkinson in a carriage bearing the legend 'The Col. John Atkinson Cigar,' " nevertheless, the injunction asked for was denied on the ground that there had been no actionable wrong and that there was no good reason for limiting the right to apply a name. The Court argued that names, as a rule, are received at the hands of parents, surnames by inheritance, and Christian names at their will; but that the rule was not invariable for the reason that many names are adopted or assumed by those who bear them; and that the right to apply a name is not exclusive for the reason that a disreputable person may select the name of the most exemplary for his child, or for his horse, or his dog or monkey. As for the unauthorized use of the picture that was held to be one of the ills that, under the law, is without redress.

A more recent and familiar case is that of Roberson *vs.* The Rochester Folding Box Company. It there appeared that the plaintiff was a young girl, and that one of the defendants, engaged in the general milling business and in the manufacture and sale of flour, had used her picture without authority for the purpose of advertising the flour. Over the plaintiff's likeness in the advertisement complained of were the words, "Flour of the Family," and below was the name of the manufacturer and the brand of flour, making, it must be admitted, a rather noticeable and attractive advertisement. The complaint set forth that 25,000 of these posters were conspicuously displayed in stores, warehouses, and saloons throughout the United States and that those which had been placed in the vicinity of the plaintiff's residence were recognized by her friends and others who knew her, resulting in her great humiliation and in an illness which confined her to bed and compelled her to employ a physician.

The case was decided in favor of the plaintiff by the Appellate Division of the Supreme Court of New York on the ground that the defendants had violated her right of personal immunity, the right not to be interfered with to her damage, danger, or discomfort. The Court recognized the fact that the plaintiff had a property right in her features, a right which has been referred to in other cases as the prerogative to control the market of one's own beauty. The defendants carried the case up to the Court of Appeals where a reversal was obtained and the injunction and damages asked for denied. Hon. Alton B. Parker, who was at that time Chief Justice of the Court of Appeals, delivered the opinion of the Court, and the decision stands for the proposition that in the jurisprudence of the State of New York the "so-called right of privacy" has found no abiding-place. It is to be noted, however, that the decision was reached by a divided Court, only four of the seven judges voting in favor of the defendants. This decision was heartily condemned by the press, abroad as well as at home. One prominent journal in New York spoke of "the

amazing opinion of Judge Parker;" while another, by its editorial censure, provoked from one of the judges who coincided with Judge Parker, the contribution of an article to a law review in defense of the decision.

In the case of Corliss *vs.* Walker, a widow and her children brought an action in the United States Courts to enjoin the publication of a biographical sketch of her deceased husband, accompanied by his picture. Relief was eventually denied on the ground that Mr. Corliss, who had been an inventor, had become a public character and had thereby surrendered his right to prevent the reproduction of his photograph. The Court distinctly held that a private individual may prohibit the reproduction of his picture in any form and recited statesmen, artists, authors, and inventors, who ask for and desire public recognition as persons who have waived their right to enjoy privacy.

While it may or may not be the law according to the jurisdiction in which the question arises, that an individual has no remedy for or legal means of preventing the publication of his photographic likeness for trade or other purposes, it is universally held that one is not without redress where he is able to show a property or a contract right in the pictures used. What is meant by a property or contract right may best be illustrated by the cases in which those rights have been adjudicated. The facts of an English case show that a woman had applied to a photographer to have her picture taken, she ordering a certain number as is usual in such cases. The photographer after filling the order made a few copies for his own use. It later came to the knowledge of the woman and her husband that her pictures were on display in the photographer's shop window in the form of decorated Christmas cards, bearing the conventional holiday greetings. The matter was placed in the hands of solicitors and their clerk subsequently purchased one of the cards which was introduced in evidence at the trial which followed. It was held that, although the plaintiff had no property right in the copies of her picture which the photographer struck off for himself, the right to grant an injunction restraining the further sale of the cards did not depend upon the existence of property but could be invoked for the purpose of restraining a breach of the implied contract which existed between the parties.

The recent Georgia case, of which mention has been made, wherein the right of privacy was upheld, presents a startling example of the extent to which it is possible for an advertiser, piratically inclined, to go. From the report of that case it appears that the plaintiff's picture was published in an issue of a daily newspaper printed in Atlanta, in which city the plaintiff resided. Above the picture were the words, "Do it now. The man who did." Placed beside the picture of the plaintiff was the representation of a sickly looking individual with the inscription, "Do it while you can. The man who didn't." Below the pictures was written, "These two pictures tell their own story," and under the plaintiff's likeness was a statement to the effect that in his healthy period of life he had been fortunate enough to buy insurance in the company whose name appeared in the advertisement, and that he and his family were enjoying the benefits of an annual dividend upon his paid-up policy. The other person was represented as saying that he had neglected to insure and had realized his error only when it was too late. The plaintiff's likeness was excellent and, being easily recognizable by his friends and acquaintances, to say nothing of his enemies, brought him into contempt and ridicule before the world in general. The picture had been used without

authority and the statements in connection with it were absolutely false. The plaintiff, being an artist by profession, claimed that the publication was, therefore, peculiarly offensive to him, and demanded an injunction and a balm of $25,000. It was accordingly held that the plaintiff's right of privacy had been invaded; that the mere fact that he had become what is known as a public character by the exercise of a profession which placed him before the public did not give to everyone the right to print and circulate his picture; and that he was entitled to maintain his action. This decision was also reached on the ground that the publication constituted a libel.

Judge Parker, in his opinion in the Roberson case, made the suggestion that the legislature had the power to prohibit the use of pictures and names, and shortly afterward the legislature of the State of New York passed an act with that purpose in view. The enactment went into effect in September, 1903, and reads, in part, as follows: "A person, firm, or corporation that uses for advertising purposes, or for the purposes of trade, the name, portrait, or picture of any living person without the written consent of such person first obtained is guilty of a misdemeanor." The statute provides further that, where a picture or name is knowingly used for the purposes mentioned, a jury may in its discretion award exemplary damages. This statute, it will be noticed, is intended to apply particularly to advertisers.

In an article of this length it is impossible to refer to all the legislative enactments that have been passed concerning advertisers, but it should be observed that such laws do exist in many jurisdictions, notably in California and New York, and that the advertiser is bound at his peril to acquaint himself with the law of the jurisdiction in which he acts.

NEGATIVE MAKING IN PORTRAITURE.*

A Study of How to Make the Most of Dry Plates for Portrait Photography, so as to Obtain Negatives as Perfect as Possible for all Printing Processes.

1. Using the best plates obtainable—how far can they be relied upon to give a correct rendering of the model in "gradation," and to what extent does an error exist in this respect in the best plates, and how may the error be modified?

2. How are we to form our judgment of what constitutes a perfect photographic print?

What constitutes a perfect plate?

The answer to that might be, a plate that would give a correct rendering of the range of tone in the model to be photographed, and that would give color values in monotone as the eye sees them; be free from halation, fog, frilling, blistering, and possessed with a microscopically fine grain. Unfortunately there is no such plate in the market: a plate giving perfect gradation does not at present exist, for various reasons, one of which is that polarization or reversal of the image tends to flatness in the highest lights (as in light draperies), and another, insensitiveness to weak rays of light, or to rays comparatively insensitive because of their

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color, tends to lack of necessary detail in the half tones and shadows. Halation also destroys perfect gradation, but this can be modified, if not entirely removed, by using backed plates. Plates are easily obtainable that, with careful manipulation, are free from fog, frilling, and blistering.

A high-grade portrait plate should possess the following qualifications:

1. Sensitiveness to weak rays.

2. A thick coating, rather rich in silver, so as to obtain "body" and "relief."

I do not think that for portraiture it is necessary that the molecular structure of the film should be fine (although this element may be invaluable for scientific work, such as microscopic slides, etc.). My personal experience is, that a plate with a fine structure or "grain" is invariably rather insensitive to weak rays, and, therefore, unsuitable for portraiture. I am unable to enter into the scientific aspect of plate film structure and chemical proportions. I can, however, say that, after a number of carefully conducted experiments, I find that certain makes of plates give much more "gradation" and "relief" in light draperies and in the modelling of flesh than others, and I have found that the best plates in this respect had not a particularly fine grain.

Lighting and Posing.

Operators, retouchers, and printers should make conjointly a study of the following:

Carefully pose and light a model in the studio. Out of a piece of cardboard cut an opening the relative proportion that the resulting picture is intended to be.

View the model through this disc, holding it at such a distance from the eye—using one eye only—as will take in the intended picture and no more. This will cut off distracting surroundings and allow the thoughts to be concentrated on the model. What is seen, viewed as described, is a picture in natural relief. The gradation and modelling of face and figure are perfect. Observe, in the facial lines especially, the soft warm luminosity of all shadows. Viewed at a distance of, say, twelve feet, the flesh texture seems incomparably fine, and the whole picture rich and round and soft beyond anything ever seen or that ever will be seen in any reproduction whatever. It is this very warmth in flesh shadows, as also the infinite variety found in flesh color, which to the eyes seem so beautifully soft, and so harmoniously blended, that make correct rendering on silver plates an impossibility. This *very* great defect cannot be successfully overcome until isochromatic plates have been made rapid enough for ordinary exposures in the studio.

In the eye picture described there is no fuzziness. The picture is being viewed at close range through a natural atmosphere, and in the rendering of the reproduction this has to be borne in mind. Suppression of detail has in the first instance to be provided for by "arrangement" and "lighting," and not falsely and crudely by faking with a blurry lens or sloppery manipulation in printing. Also the reproduction should —as far as study and skill can make it with the means at hand—be as rich and round, as soft and pleasing as the original appears to the eyes viewed as above. Time, and time alone, should give the mellow tone so much admired by art collectors.

Retouching.

A careful consideration of the foregoing remarks will lead to the conclusion that photographs do not, as generally supposed, flatter the individual, but as a matter of fact the very best efforts usually come far short of the original

in respect of balance of tone, fineness of flesh texture, softness of facial lines and shadows, breadth of lighting, and general refinement. Indeed, all photographic pictures where flesh is rendered are extremely coarse in texture and the facial lines hard.

The efforts of retouchers in general are usually misdirected, because the error that exists in all negatives have not been studied scientifically and the proper remedy applied. Too much attention is usually given to mere refinement of texture in flesh, all faces being treated alike, without judgment, and with an entire absence of artistic feeling. The result is a level monotony in most subjects of the camera, a commercial looking, marble-like "hardness" that has justly earned the condemnation of persons of taste, and has brought no little contempt and discredit on the profession of photography.

Many professional photographers have made no effort to obtain an art training, and have only a hazy notion of the elements of pictorial art. They are like people who play or sing by ear, and like them they are imitative, not constructive in their ideas. The apprentice of such a master is set to retouching with as much idea of the elements of art as is possessed by the joiner's apprentice who is put to work to "smooth plane" a deal board. In due course he attains sufficient mastery of the pencil to evenly distribute black lead over the faces of the negatives of his master's customers, cultivates a fine stipple, and, by and by, has a fine idea of his artistic accomplishments. He pleases his master, and should he be in want of a situation will demand the salary of a young doctor. His art is of the same order as that of the young joiner, who by this time can plane door panels as smoothly as plates of glass, and can handle his tools with satisfactory mechanical ability, and is satisfied with tradesman's wages.

There is only one pathway by which the profession of photography can be elevated to the position desired by its admirers and followers, and that is by insisting upon apprentices having a thorough art and technical training, with sufficient knowledge of chemistry as will give a good understanding of the various reactions. There would thus be artists in the studios whose efforts would be well seconded by artists at the retouching desks, and the only care required to be exercised would be to see that there were not too many entering the profession, limited as the demand is and always will be for photographic work.

Nature of the Plate.

We will now proceed to study the make of plate selected for photographic portraiture—and which shall be rapid, fairly thickly coated, rich in silver, and not too fine in texture—and endeavor to find out the extent of the error in gradation, and how to equalize the same so that, with the aid of "retoucher" and "printer," the reproductions we undertake from life shall be in the highest measure possible approaching in balance of tone to the original.

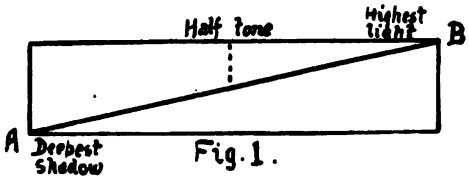

Fig. 1.

Fig. 1, is a greatly enlarged section of the film on a dry plate, the straight line from A to B indicates the equality of gradation that ought to exist from the highest light to the deepest shadow. If plates gave correct rendering, overexposure would not be so frequent as at present. There exists, however, the curious property in plates that beyond a certain exposure to light the action of

the deposit reverses, and should the exposure be long enough, development would produce a positive instead of a negative. Should an attempt be made to photograph a lady in a white dress with dark surroundings and should an exposure be given sufficient to bring out correct gradation in these surroundings, it will be found on development that all the beautiful sparkle and gradation that was to be seen in the light dress has in the negative turned out pointless and flat. The highest lights have to some extent already reversed, and gone far to meet the comparatively delicate shadows.

The rendering of gradation by the plate in this case would be very incorrect, because it is beyond its rendering power no matter how developed. This will be understood by reference to Fig. 2, in which we see the curved line *a'*—*b'* contrasted with the diagonal or line of correct gradation A—B. The gradation of the white dress is represented by C—*b'*. The surroundings are fairly correct from *a'*—C. If the plate had given a correct rendering, the section of deposit would be represented by the line A—B, of which the dotted line D to B would represent the white dress.

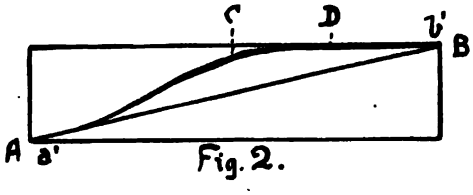

Fig. 2.

We learn from this illustration that the rendering capacity of a plate is very limited, and that the limit should not be exceeded farther than possible, and that subjects wearing light dresses should have surroundings of a more or less delicate nature, or such as will not unduly overstrain the capacity of the plate.

A person in a white dress may, however, be taken advantageously with background and surroundings of a dark nature; indeed some very soft and rich effects may be secured by strong contrasts of this nature, especially in carbon in the warmer colors, but correct exposure must be given to face and dress, and development conducted so as to make the most correct rendering of those. In this case the background will have been considerably under-exposed, and in the reproduction from the model it will appear several shades darker than it appeared to the eye; but the general effect need not be bad, and sufficient gradation ought to be obtained as will give the background of the picture richness and transparency. The gradation of the plate in this instance would be represented by the curve in Fig. 3.

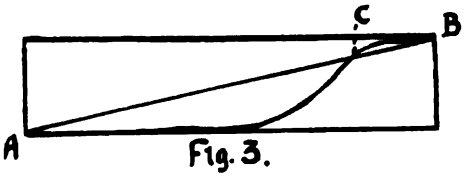

Fig. 3.

The exposure is fairly correct from C to B, although, in order to have the face correct, the curve still shows slight over-exposure. Slight reversal in this case would have taken place in the highest lights of the dress.

Descending from C to A it is seen that there is an immediate and rapid falling away to under-exposure, and some of the deeper shadows will be rather massed and lacking in gradation.

Fig. 4 represents the exposure curve of a plate the subject of which is anything within the limits of correct rendering, that is without extremes of light and shade. In this instance the exposure and development have been correct, and the curve shown represents the error in its least apparent form. The reproduction of the model should be in every way pleasing to the eye, and

technically as perfect as it is possible for a photograph to be. The negative will appear soft and round, with just touches of bare glass in the shadows, and will have sparkling "high lights" and plenty of "body" throughout. I do

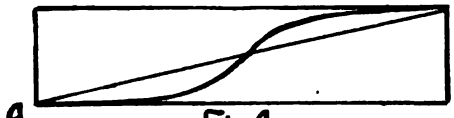

Fig. 4.

not say, however, that as a picture the effect will be more pleasing than the very incorrectly rendered effect shown on Fig. 3 (that will depend upon the artistic element introduced into the study), but I should say that the balance ought to be in favor of Fig. 4. In this case it will be seen that the extreme high lights still show a tendency to flatness and the deepest shadows to under-exposure. In both cases, however, the error is slight, and it is just here that the observation and talent of the retoucher ought to come in and make the necessary corrections.

The parts suffering most will be confined to what the eye can most readily detect, such as exaggeration of facial lines, eyes, mouth, lips, chin, neck, etc.

The high lights on brow and nose sometimes require slight accentuation, also draperies, etc., etc.

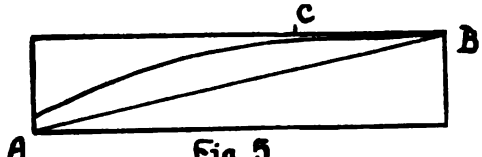

Fig. 5.

Fig. 5 represents the exposure curve of the same subject as Fig. 4, but in this case there has been considerable over-exposure, with the result that the highest lights are far gone in reversal, and there is little contrast. The whole picture appears flat and without point. There will also be a rather thick veil over the shadows, and the negative will be a slow printer. Reduction and subsequent intensification will improve this negative, but, as the highest lights have partly reversed, the sparkle of a correctly exposed negative can never be obtained. In this case the art of the retoucher can do much to improve the printing qualities, but a deal of very careful and expensive work will be required, and where possible a resitting should be obtained. With such a negative a really good carbon print becomes impossible.

Over-exposure can be corrected to a very great extent by manipulation of the developer, but this can only be done in cases where over-exposure is known beforehand to exist, hence in very particular work it is wise to expose well

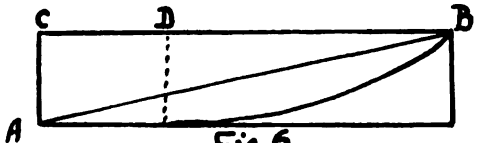

Fig. 6.

and in duplicate, so that, although one negative may be wasted, the other will be saved.

In Fig. 5 it will be seen that there is from C to B a considerable running together of the high lights.

Fig. 6 shows the exposure curve of the same subject as Figs. 4 and 5. In this case the exposure is very much "under." It will be seen on referring to the diagram that the high lights will be intense and without correct gradation. The deeper portions of the picture from C to D will be represented by almost bare glass, and be entirely devoid of detail. The picture will be hard and disagreeable, appearing like what a writer on photography describes as "soot and whitewash."

There is no remedy for under-exposure. Where it is known to exist

beforehand, the use of weak developer and prolonged development will do much to modify the error, but there can be no deposit where there has been insufficient light action.

A careful consideration of the foregoing remarks leads us to the conclusion that the remedies for the existing error in dry plates are:

1. Correct exposure, according to the point of chief interest or importance in the picture under study (in portraiture this would be the head);

2. Development with such modification as shall keep in view the point of chief interest, and bring out such points of harmony in the subordinate parts of the picture as the plate film is capable of rendering, so that the existing error may be as little as possible visible to the eye.

After the model has been posed and lighted, as instructed earlier, let it be viewed as before described through a correctly proportioned disc, and let the play of light and shade be very carefully noted, also the flesh tints; for here the greatest difficulty in correct rendering presents itself.

The exposure ought to be such as will make *as nearly as possible* correct gradation of the *head* of the model, and development ought to be stopped exactly at the point that will represent correctly the highest light on the brow. Points of light upon white linen worn by the model will (if the exposure has been correct) be sufficiently sparkling to give fleshiness to the highest lights on the flesh by contrast.

All points of development will have been skilfully conducted, and the resulting negative ought to be as perfect a rendering in light and shade of the model as modern photography can make it.

Gradation.

With the errors in gradation, apart from the flesh, I do not propose to say anything farther than this: parts of the figure, drapery, or background that may be out of tone ought to be modified by covering up or by local reduction, both operations requiring *great* skill and judgment. The rendering of flesh, especially if the model is young and healthy, will be found to be very incorrect, and will require artistic taste and judgment and skilful manipulation to treat it successfully and in such a manner as shall disguise the appearance of "handling."

All flesh shadows are warm, and consequently comparatively "non-actinic," *facial lines are, therefore, rendered darker than they ought to be.*

The lips are very red, and the shadow of the upper lip is always much too dark. In correcting the mouth "shading" it should be remembered that the deepest shadow should be about the centre of the lips, and the shading ought to become more delicate as the corners of the mouth are approached. When side lighting predominates, the line from the nose to the mouth is always *much* too strong; and should the lines under the eyes be strongly marked, these also will be found too sharply rendered.

On viewing the model before exposure it will be seen how delicate all the shading on the features is, and if the student wishes to perfect his ideas and add to his knowledge he will, after all the corrections in feature have been made as described, make a good print and compare it with the re-posed model in the studio, the lighting of which should be the same as when the exposure was made.

After the corrections have been made to the facial lines, the texture of the flesh will claim attention. The skin of the face varies in thickness, color and transparency. The thinnest skin is over the brow or forehead, and here also it is whitest, and being more tightly drawn over the bone reflects stronger

high lights than the cheeks. The top of the nose, for the same reason, has usually pronounced high lights. The high light on the brow often requires strengthening, as also does that of the nose. Very often the latter organ is ruined in appearance by a thin pencil line being drawn along where the beautifully diffused high light ought to be. It must be remembered that the highest lights on the face have to be subordinate to those on linen or other white substance near the face. The correct management of high lights is of the greatest importance.

I now come to the part of the negative, the correction of which requires little beyond mere manual dexterity and a pair of good eyes, viz., the refining of skin texture. This would be altogether unnecessary were it not for the fact that the variety of color, in the flesh of the face, is very incorrectly rendered, as compared with what it appears to the eye—yellow and red and brown patches that are so softly blended as to be invisible, by reason of their non-actinic quality (photographically) come out in the negative greatly exaggerated, especially is this so in the middle tones of the face.

The proper *amount* of correction in this case can be arrived at by long experience only; the manipulation itself is easy, and such as any young person of average intelligence can learn in a few months.

With many persons calling themselves expert retouchers, this part of their work (viz., the refinement of texture) is the beginning and end of the whole operation, and some perform their duties in this respect with as much intelligence as would be required in the blackleading of a stove pipe.

The qualification of being able to produce fine texture is a necessary accomplishment in every retoucher, just as the correct playing of the various scales are to a musician, but the possession of this power is only a means to an end. A successful retoucher must be an artist by training, mentally and technically, and an intelligent observer at all times and under all conditions of the wonderful variety and effect of light on the human form, and of all that appeals to our sense of beauty of line and texture.

There is an element, I have not yet discussed, much insisted upon but greatly misunderstood, by a certain section of photographic workers, and that is the so-called æsthetic element. In all refined work this element is ever present. A certain writer defines it as "that which gives us an undefinable sense of pleasure in looking at anything beautiful." I believe, that as applied to photography this element is greatly misunderstood and that a false sense of it has been inculcated by the prominence given (I dare say in ignorance photographically speaking) to bad technique at leading exhibitions, and as a result, year by year many have been wandering by reason of the false teaching, farther and farther from the truth. Crude lighting, sloppery manipulation, and chance, these have been the false gods worshipped by many devotees of photography, oftimes encouraged by those who ought to make it their *business* to know better.

The Perfect Print.

How are we to form our judgment of what constitutes a perfect print?

Of course there never has been nor ever will be a *perfect* print, and the word is used here in its limited sense as applied to all human work, which however skilfully executed can never be said to be perfect, as that would imply that there was nothing farther to be done, and that the climax of art had been reached.

A perfect photograph should be an exact reproduction of all the artist in-

tended the model to be, posed, lighted, and composed, and viewed as described at *close range.* (I am always speaking of portraiture only.) It should possess all the softness, richness, and roundness of the original and its surroundings, nothing suppressed, but everything in perfect tone and harmony. If the subject is strong, so should the reproduction be (not hard, nature is never hard): if the subject is delicate so must the reproduction be. In short, the most perfect reproduction is the one that comes nearest to the model, all the pictorial detail of which has been previously schemed by the artist, with all the imperfections of the plate modified, if not entirely removed, and *without embellishment*, flesh and feature rendered as the eye sees it, and *no more.*

From what I have said concerning the error existing in plates, and the manipulative dexterity and experience necessary to overcome it, it will be seen that photography is very far from being an easily learnt accomplishment (if not an art).

A perfect print, technically, is not easily produced by the most skilful photographer, and a photographic print that is both technically and artistically perfect (in the sense that I am using the word perfect) is, I do not hesitate to say, a work of ART, and the person capable of producing such prints, either personally or partly under his or her instruction, is in every sense of the word an *Artist.*

HOW A BEGINNER WORKS KALLITYPE.

BY MARGARET WALPOLE.

MOST workers on beginning photography select P. O. P. as their printing process, partly because it is cheap, partly because it is generally supposed to be easy. Perhaps it becomes monotonous after a time, yet many shrink from trying any other daylight printing process; in the first place, because of the extra expense entailed by, say, carbon or platinotype, and in the second from a fear of an increase in the many pitfalls and difficulties which lay wait for the beginner on every side. On such of my fellow beginners, then, as are deterred by either or both of these reasons from sallying forth into "fresh woods and pastures new," I urge the attractions and advantages of the little used Kallitype process which is admirably suited for beginners. Firstly, it is cheap, far cheaper than even P. O. P. Secondly, it is very simple. The only difficulty from first to last is in judging the depth of printing, and the use of any simple form of actinometer reduces this to a minimum. Thirdly, any variety of tone from a dark velvety brown to a warm sepia can be got by simply modifying the developer. Fourthly, by adding more or less restrainer (potassium bichromate) to the developer, strong prints can be obtained from weak negatives, and soft prints from harsh negatives. There is a glorious uncertainty about the average beginner's negatives which makes this last peculiarity of the process a not undesirable one from the beginner's point of view. The finished prints somewhat resemble platinotype in appearance, and, as in that process, iron salts form the light sensitive medium. Briefly, the paper is coated with a *ferric* salt which is reduced to a *ferrous* salt by exposure to light. This ferrous salt acts upon silver nitrate, the decomposition of the nitrate giv-

ing rise to a visible image. The paper, which may be sensitized at home may be almost any good writing or drawing paper. Cartridge paper does very well if a rough-surfaced paper is required and those who object to cutting up the large sheets can get the small drawing blocks. The sizes vary from 5 x 3½ inches upwards, the smallest size costing 10 or 12 cents and containing about twenty-four sheets.

The sensitizing solution is made up as follows:

Ferric oxalate	75 grains.
Silver nitrate	30 grains.
Distilled water	1 ounce.

Silver nitrate fluctuates in price but averages 50 cents per ounce. Ferric oxalate costs 25 cents per ounce. These two are the only expensive ingredients used in the whole process, and as one ounce of sensitizing solution will serve to coat many dozens of 3¼ x 4¼ papers, it will be seen that the cost is not very ruinous.

To make up the sensitizing solution weigh out the ferric oxalate and put it with the water into a stoppered bottle. Place the bottle in a saucepan of cold water on a stove and let it heat gradually, until, with constant shaking the oxalate dissolves. Should it fail to do so readily, 5 to 10 grains of oxalic acid may be added. It is then filtered and the silver nitrate added and allowed to dissolve. This solution will keep good in the dark for several months. The paper must be sensitized in dim daylight or artificial light. The latter is perhaps better as it allows one to see what one is about. The paper should be pinned to a drawing board and the solution applied with a sponge, a pledget of cotton-wool, or, better still, a strip of celluloid doubled and covered with flannel or flannelette. It will be found that some papers require more of the solution than others, and in coating rough papers, care should be taken that the solution goes well into the little depressions and interstices of the paper. When sensitized it may be hung up to dry in a warm dark room. Drying takes from half an hour to an hour, and if necessary the process may be hastened by holding the papers in front of a fire, or, as soon as they are surface dry, laying them face downward on an ironing blanket covered with a cloth and passing a warm iron over the backs until all sensation of damp is removed. If the paper is not to be used at once it must be stored in a calcium tube as it is extremely sensitive to damp. In this it will keep good for some days, but it gives better results when used fresh, and as sensitizing is a very quick and easy process it is better to prepare only what is wanted for immediate use.

Negatives must always be printed from in the shade, and an actinometer should be used as some papers "print out" more than others. As a rough guide for first printing, print until a very faint image (bluish-grey on a lemon ground) is visible. One or two trials will give the correct actinometer tint and a note should then be made on the negative. If the correct tints are found for two or three negatives of different degrees of density, they will serve as guides for others. One word of caution, though. Do not decide too hurriedly as to whether a print has been correctly exposed or not. A certain amount is lost in the fixing bath and the prints dry a little darker than they appear when wet. The paper is very rapid, much more so than P. O. P., and slightly more so than platinotype, and care must be taken not to fog the prints when examining progress of printing. It should be done in artificial light or very dim daylight.

The developers may be made up as follows:

1. For brown tones—
   Borax ..... 1 ounce.
   Rochelle salts ..... ¾ ounce.
   Water ..... 10 ounces.
   Potassium bichromate, 1 p.c. sol., 6 drachms.

2. For warm sepia—
   Rochelle salts ..... ½ ounce.
   Water ..... 10 ounces.
   Potassium bichromate, 1 p.c. sol., 4 drachms.

No. 1 developer gives warm black tones with some papers. By mixing the two developers in varying proportions a great variety of tones can be secured. The function of the bichromate of potassium is to give vigor to the prints, and more or less should be added to the developer according to the character of the negative printed from. Too little will give muddy prints with degraded high-lights, while too much will work havoc with the half-tones. The prints should be immersed in the developer face upward, sliding them in to avoid air-bubbles. They must be left in for from fifteen minutes to half an hour to render the iron salts soluble. They are then rinsed in one or two changes of water and transferred to a fixing bath of—

Hypo ..... 1 ounce.
Strong ammonia 880 ..... 2 drachms.
Water ..... 20 ounces.

In this bath they must be left for ten minutes in order that all traces of soluble silver salts left in the paper may be removed. Half an hour's washing in running water completes the operation.

An alternative method is as follows:

1. Developer for brown tones—
   Borax ..... 300 grains.
   Rochelle salts ..... 450 grains.
   Water ..... 20 ounces.

2. For warm sepia tones—
   Rochelle salts ..... 450 grains.
   Water ..... 20 ounces.

3. Restrainer—
   Potassium bichromate ..... 25 grains.
   Water ..... 5 ounces.

For normal negatives half a drachm of No. 3 should be added to each four ounces of developer. The prints are developed by flotation and immediately transferred without any washing to a clearing bath of—

No. 2 developer ..... 4 ounces.
No. 3 restrainer ..... 2–3 drachms.

In this bath they should be left for at least ten minutes, then fixed and washed as described above.—*Photographic Monthly.*

Two thoroughly practical little books on this subject are *The Photo Miniature*, Nos. 47 and 69.

Lantern Slide Making. In advocating the use of backed lantern plates to obtain the best slides, Dr. Lakin, at the Simpson Memorial Camera Club, was endorsing advice that has been given more than once in our columns. He was very emphatic about the absolute necessity of cleanliness in all the operations connected with slide making, and recommended the use of a good yellow light and plenty of it. The developer he used was:

No. 1.

Hydroquinone ..... 160 grains.
Sodium sulphite ..... 2 ounces.
Citric acid ..... 60 grains.
Potassium bromide ..... 40 grains.
Water to ..... 200 ounces.

No. 2.

Sodium hydrate ..... 160 grains.
Water to ..... 20 ounces.

For brown tones: one drachm of No. 1, one drachm of No. 2, and six ounces of water were used, and for warmer tones exposure is increased, and ten, twenty, or thirty minims of 10 per cent. potassium bromide added to that quantity of developer. Dr. Lakin went on to say that fine effects could be obtained by using an ordinary gold and sulphocyanide toning bath.

Copyright 1906 Pirie MacDonald, New York

By Pirie MacDonald, New York

By E. B. Core, New York

By Marceau, New York

By Bradley Studios, New York

By Curtis Bell, New York

By Barron Fredricks, New York

"A SCENE IN SULLIVAN COUNTY, N. Y."
Copyright 1901
By H. Hendrickson, New York

STAGE SCENE
Flashlight. By Jos. Byron, New York

BYRON—"THE STAGE IS MY STUDIO."

BY SIDNEY ALLAN.

In this age specialism is the order of the day. It is generally accompanied by success. The man who is wise enough to concentrate his faculties and restricts his field of action to what he can do best has a better chance than his more versatile competitor. Of course the start is difficult for the specialist. He has to assert himself, he has to create his own speciality and convince his prospective customers of its necessity and his superiority in the particular line he has chosen to exploit. But as soon as he has made good, provided he has the necessary business foresight, patience and perseverance, he will have a comparatively easy time of it. Orders will drift to him as by their own accord; one customer will recommend another, and his trade will steadily increase the more he insists upon his speciality, that he is the one man who can do a certain thing better than anybody else.

Byron is such a specialist. He is known as the photographer of the stage; the theatrical flashlight man. He prefers to call it *artificial* light, but of that anon. In the theatrical world, as well as in the profession, he has gained the reputation of being the leading "flashlight" photographer, and the epithet, "will he nil he," will stick to him as long as he lives.

He can be justly proud of it. He has been one of the first to apply flashlight photography—some forty-three years ago or more; he has mastered all its intricate technicalities and brought it to a higher grade of perfection, pictorially as well as practically, than anybody else.

One wintry morning last November I sat at his office—for he has no reception room—"the stage being his studio" and he told me of his varied experiences. Byron is as candid, jovial, and wholesouled a Britisher as I have ever met, and he still drops his h's with the same alacrity as if he had just crossed the big pond, instead of being with us for more than eighteen years.

Byron made his first flashlight, using magnesium wire, on March 10, 1863, at the occasion of some festivity at which the Prince of Wales, the present King, furnished the central figure of attraction. The result was not a very startling one. He only succeeded in getting silhouettes with the slightest indication of detail. Slowly he conquered the difficulties of the process and when he came to this country in 1887 I believe he was an expert in the game, with considerable experience behind him.

Yet at that time nobody wanted flashlights. The theatrical managers had no use for them. Byron went from one office to the other explaining the advantage of flashlight pictures, its merits as an advertising medium, as actual pictorial reports and records showing at a glance the character of a production, its scenery, costumes, and placing of accessories, but they would have none of it. They were of the opinion that the customary way of sending out diagrams served their purpose better than any new method. So Byron got connected with a newspaper. Flashlights as illustrations were a decided novelty and Byron made a hit with them, the managers, however, continued to shrug their shoulders at the

innovation and only reluctantly gave permission to have some of their performances photographed. They considered it a great nuisance.

But there came a time when the public had grown so used to this kind of illustrations that it would have been very unwise to discontinue them. For a while there was a decided danger that this would happen. The editors did not see any reason why they should pay for illustrations that advertised the theatres, and the managers did not yet fully realize the value of this pictorial reclame. Byron, a true pioneer, was equal to the emergency. He knew his time had come. Again he approached the managers, and this time with some success. They began to consider it. First one came around—Lederer I believe—then others followed suit. They paid Byron for his work and furnished the photographs gratuitously to the papers. And suddenly Byron found himself the possessor of a lucrative trade created by himself.

That was about twelve years ago. Today, it is difficult to believe that there was even a time when theatrical flashlight photography was not an established fact. No manager would think of sending out a production on the road without having secured a full set of all the principal scenes in the play. It has really become his helpmate in booking engagements and advertising his plays, and seems to do its work more effectually than press clippings or any other method of recommendation. Of course Byron has many competitors now, but he still holds his own, and as far as workmanship and pictorial treatment is concerned, he is still king of them all.

The secret is that he has steadily improved. He did not rest on his laurels and energetic worker that he is—the number of his negatives reached the 23,000 mark some time ago—did not allow his work to become stereotype. It is now better than ever.

I had the opportunity to look at some of his work of fourteen or fifteen years ago. It looked very much like some of the work his competitors are doing now. His photographs of that early period are good flashlights, well-posed, well-lighted, and clear in detail, but there is no discrimination in values. A white gown is simply rendered white. There is no gradation, no subtlety, no finer pictorial effect. The pictures look blank and bald like so many we see standing in the theatre entrances.

The Byron of today is made of entirely different mettle. His pictures are no longer mere records, they are studies in light and shade. The lightest spot of the picture is skilfully reserved for the principal character of each scene, and the rest of the figures and accessories are subdued without loosing their distinctness. Everybody familiar with the garishness of stage scenery will realize how difficult it must be at times to eliminate its objectionable elements, for instance the netting and sharp outlines of drops and wings, and to give to mere daubs of paint something like depth and natural appearance.

Besides, good lighting is very scarce. It is generally done without real understanding in a kind of slipshod manner. Irving and Duse were notable exceptions. Their scenes could be taken very much as they were represented to the audience.

But the majority of productions need re-composition, and Byron has learnt to overcome, to a large extent, the difficulties caused by inadequate lighting. He conceives his pictures like a painter and prints his compositions and light effects with his flashlights, of which he used frequently as many as eight. They are really not flashlights, but continual artificial lights which he has under perfect control as he prepares his own magnesium powder. Contrary to the general custom and belief he does not take his pictures by a single flash but by one to two second exposures.

He allows himself time to wait for the most opportune moment, and yet he works with lightning rapidity, making sometimes as many as thirty exposures in an hour and a half. One of his peculiarities in operating is that he never shuts out any source of light, but on the contrary, that he uses every illuminative available, may it be the footlights or a streak of daylight, to heighten his effects. A twelve foot stand enables him to get a full view of the stage and his pictures all show a stretch of foreground that help the naturalness of the scene depicted.

With his lights he plays like a magician. He orders his men about all over the stage and auditorium, places one man in the flies, another in a proscenium box, a third quite near the principal actor and so on until he has finished the composition in his mind's eye. It is wonderful how he manages to concentrate a streak of light on one person. This is, no doubt, done with some special device which controls the expansion of light, perhaps by a funnel-like shade attached to the stand; but we do not know, we can only guess at it. He admits that there are some tricks in his trade, but he is not willing to disclose them, or even use them when the coast is not entirely clear. "Not that I object so much to letting them know, and to profit by my experience," he remarked to me, "but I object to their claiming it as their own invention, which they have done in more instances than one."

The great fault of flashlight photography lies in the falsity of its lighting. There are interiors where the light is supposed to come from the window, while the shadows of the furniture indicate that it comes from the opposite direction. In some of his pictures I discovered so many sources of light that the chiaroscural scheme was reduced to a battle of lights against each other. They, however, perfectly balanced each other and eliminated all darkness in the shadows.

"You do not strive for any accurate lighting?" I asked the photographer.

"No, that is out of the question" he replied, "just as plain truth wouldn't do in a story, accurate lighting would not make a good picture. Something has to be added."

I was not quite satisfied with this answer. To go contrary to all laws of lighting can hardly be right. And yet in a stage representation everything is artificial; the whole aim is to produce an illusion, and as long as pictures of it produce a similar effect I suppose one has to excuse the chaos of conflicting lights. The principal thing is, after all, to make a good effective picture that plainly tells its story, and this Byron invariably does, adding to it a certain artistic refinement that enhances its value to the more critical and fastidious mind.

The life of a theatrical flashlight photographer seems to be rather a strenuous one. He has to keep up with all the new productions, familiarize himself with the dramatic situations and be ready to be called away at any moment to photograph a play during a dress rehearsal or perhaps late at night after a first night production. The latter are generally in out-of-town places, and at short notice, he and his assistants with all the necessary implements have to journey to New Haven, New London, Boston, Baltimore, or Washington (sometimes even as far as Pittsburg or Chicago) and as soon as they arrive look up the theatre and get ready at once for action.

The number of engagements Byron has covered in the last ten years is an astounding one. The majority of all leading productions, with their original cast, scenery, and costumes, during that period have been duly recorded by him and there is hardly an actor or actress of prominence who has remained

unrepresented. Irving, Duse, Rejane, Bernhardt, and all our native favorites, are there. It is an interesting assembly that will increase in interest with every year. It is a pictorial history of our stage, and it is Byron's merit that he has told it in an expressive and artistic manner far beyond the average of photographic records.

THE MANAGEMENT OF REMBRANDT LIGHTING.

THE term "Rembrandt" lighting was applied by someone at some time who had a very incomplete idea of the special character of many of the portraits produced by one of the greatest of the world's painters. A picture may have a preponderance of shadow, the high lights being few and forcible, or it may have a preponderance of lighter tones with darker notes of emphasis. The greater number of Rembrandt's pictures are characterized by strong shadows and small areas of brightly lit portions of the subject. The photographer when he speaks of a "Rembrandt" lighting, too often thinks of a head turned sideface with a strong light thrown on the profile and the rest of the face and figure almost detail-less, a dark solid mass. This is precisely what a "Rembrandt" portrait should not be. Dividing the lightings of a "Rembrandt" character into three subheadings we may consider full or nearly full-face portraits with a strong illumination from the side; side or nearly side-face portraits with the face looking more or less towards the source of illumination, and quite side-face portraits in which the whole of the face is in shadow, the profile being outlined only, this style of lighting being sometimes called "line lighting."

There are certain defects common to all these styles which unfortunately exist with only too great frequency. The tendency is to employ much too strong a light, with, as a natural consequence, too great a contrast in the subject. The high lights of the negative are thus fully exposed, and are very dense on development, without the shadows being sufficiently exposed. Or, per contra, if the shadows are exposed the high lights are solarized and all proper modelling is lost. Frequently, even if the lighting is sufficiently soft in character, the negative is very much over-developed, and has harsh printing contrasts. Again, the face is usually turned toward a strong light, with the result that the reflexes in the eyes are too large, and need scraping down in the negative, a very critical piece of work and one calculated to destroy proper expression. Further than this, the strength of the light causes the pupils to contract and the actual expression is not so good as when the pupils are larger or more dilated.

Normal "Rembrandt" Lighting.

Let us see then how these defects may be avoided and how the desired effects may be obtained with the greatest economy of time. Taking the full-face, or the nearly full-face portrait first, we place the sitter in the normal position in the studio and light the head so as to secure a nicely rounded lighting with soft transparent shadows, keeping the reflexes equal in both eyes. Now place over the head, more toward the shadow side, an opaque head screen, watching carefully the result, which should be that of increasing the area of the shadows and so conveying the effect of more forcible illumination of the head as a whole. If the original lighting has any tendency to flatness, that is, if there was too much light admitted from top

and side toward the front of the sitter, the blinds here must be closed. If the lighting is the normal 45 degrees from top and front, however, the opaque head screen should do all that is necessary in the way of increasing the area of shadow. Of course, a somewhat dark background will be used, and it may be pointed out that if the background is gradated, the dark portion coming against the light side of the head, and vice versa, the result is to accentuate the effect of contrast, to make the lights more forcible and the darks more rich, while at the same time the actual contrast is not increased but is kept within the compass of the plate, and the shadow detail will be recorded before the high lights are over-exposed. A moment's consideration will show the worker that this is the principle on which to work, for in the normal full-face lighting we have the high lights strong enough and the shadows dark enough. All that is needed for the production of the Rembrandt effect is to get a smaller area of light and a larger area of shadow, and this is most easily effected in the way suggested. It will be noticed that this method pre-supposes the ability to light a head well in what may be called the normal way, and, of course, also assumes that the lighting in the studio is properly under control and that the studio is not flooded with light from every direction.

Two alternative methods may be given for obtaining this same effect, in each case starting with the normal full-face lighting as the basis. The one method is to turn the head a little further from the light, that is, more toward the three-quarter face position and then move the camera further to the side so as to obtain again a full-face view of the head. The second method consists in bringing the sitter nearer to the camera until the proper effect is secured, and then, of course, drawing the camera back also so as to get the image on the ground glass of the proper size. An objection to both of these alternative methods is that the character of the lighting is more distinctly side-lighting, and this does not give so good a modelling, in some instances conveying a swollen appearance to the cheek or neck.

Side-face "Rembrandt" Portraits.

We may now proceed to the second type, the head photographed side-face looking toward the light. Again, the simplest method of procedure is to light a full-face portrait in the normal way, taking care that the reflex shows equally in both eyes, but only just in the eye on the shadow side of the head. Now, without moving the sitter, wheel the camera round so that a side or nearly side-face view of the head is obtained and it will be found that the effect of light and shade is almost if not quite satisfactory. It may be that the shadow will prove a trifle lacking in transparency and should this be the case a reflector of gray calico may be placed as near the camera as possible so as to avoid any danger of cross lighting. If this reflector be a frame covered with canvas, papered white, the device originally adopted by Mr. Henry Van der Weyde may be used, a hole being cut in the reflector on a level with the camera, and the lens then pointed through this aperture. This method gives a soft illumination of the shadows with the risk of cross lighting reduced to the minimum. Of course, this method of obtaining side-face Rembrandts necessitates a studio of considerable width, and as this is by no means a general condition of things, it cannot be so often employed as might be desired. The following method then will be that most generally useful. Open about four feet of side light at the extreme end of the studio; the end occupied by the sitter, and about as much of the top light, taking care that the general angle of illumination is 45 degrees. Avoid too low a side light, which is apt to glare into

the sitter's eyes, producing the excessive reflexes referred to, and avoid also too direct a top light which causes the hair to be much too white. If the blinds cannot be arranged without excess of top light a translucent head screen must be used to soften the lighting. Now place the sitter somewhat nearer to the camera-end of the studio than the open glass so that the lighting is from the side, but rather behind the sitter. On turning the head toward the glazed side of the studio it will be found that the eyes are not looking to the open glass but at the curtained portion of the window, and if the photographer places himself in front of the sitter, getting a full-face view, he will find the lighting is practically a normal full-face lighting. Now, with the camera getting a side-face view of the sitter and the reflector arranged so that the lens looks through it or just past its edge, a good Rembrandt lighting will be obtained.

Line Lighting.

We are now left to consider the line lighting, which is, perhaps, the least used of the three types. Only the most perfect and refined profiles will bear this treatment. The effect to be aimed at is a shadow filled with soft delicate detail, while more or less all round the head is a line only of light. On the hair the light will be rather pronounced. To produce this effect the light must be almost exactly behind the sitter, and as the background, if too large or too near, would cut off all the direct light, it becomes necessary to keep it well back from the head and to use a back light in which top light predominates. Care will be needed to prevent light striking into the lens, and here, again, the reflector through which the lens looks will prove a valuable adjunct, for in addition to softly illuminating the shadows, if properly arranged, it will prevent any light other than that from the subject reaching the lens. One of the causes of frequent failure when employing this method of lighting is the placing of the model too near to the light. A large dark background at a good distance and the sitter well in front of the light will give the most pleasant effects.

Development.

It may not be inappropriate to add a word or two on the development of plates exposed under the conditions considered. A perfect piece of lighting may be spoiled in its rendering if the plate is badly developed. The usual mistake is over-development. These Rembrandt lightings are almost invariably taken with dark backgrounds, and a negative so produced needs less development than one of a normal vignette head against a light gray background. Either the normal developer may be used and the time of the development shortened by about 25 per cent., or the developer may be diluted by the addition of, say, half its bulk of water, and development carried on for about the normal time. In any case prints should be carefully examined, and if there is any lack of gradation in the highest lights by the time the shadows are deep enough, it may be taken as an indication to soften the lighting, or if that be sufficiently soft, to keep the negatives less strong in contrast by one or other of the methods indicated.—*British Journal of Photography.*

Magnesium powder 60 grains, chlorate of potash 90 grains, is a good flash mixture for ordinary work. It must not be used in a lamp and must be dried separately and carefully mixed with a feather or piece of stiff paper.

When focussing a group by flashlight, the positions of the members of the group and the details of their faces can be most easily ascertained on the focussing screen, by each one holding a lighted taper or match near the face.

A PHOTOGRAPHER OF CHILDREN.

[LOOKING through a copy of the *British Journal of Photography* of some few months ago we came across the following account of Mr. E. B. Core and his work. Elsewhere in this issue we reproduce one of Mr. Core's studies of children and are glad of the opportunity to reprint this appreciative account of the man and his methods for the benefit of our readers.—ED. W. P. M.]

A Pioneer.

American photographers are to the fore this year. A few weeks since we met "Byron, N. Y.," the veteran flash-light worker, who a generation ago found that the English public were too slow to appreciate a new thing and so crossed to New York to score success. And more recently, while we were chasing Pirie MacDonald, we ran across Mr. E. B. Core, the New York photographer who banishes men and women alike from his studio and limits his energies to portraits of children. Mr. Core is a man interesting to photographers in that he is a pioneer, if not *the* pioneer, in specialist portraiture. It is just about eight years since he set the example, followed by others, of relinquishing a successful business to sink or swim in a new venture. He gave up a well-established connection in Cincinnati, where his work had won him an enviable reputation, and came east some six hundred miles or more to be the photographer of New York's children.

The Man and His Studio.

Mr. Core does not strike one as an aggressive man. His manner with adults is gentle almost to bashfulness, but he has a fund of quiet enthusiasm and he is a capable business man. His venture was an immediate success; eight years have attested that it is also a permanent one. He believes that it is not difficult to build up a successful business for the photographing of children; but then few things are difficult to the man who is master of them. His success has been merely that of the right man in the right place. In connection with this he mentions a curious fact. In spite of the undoubted and much-talked-of success of a few men venturing in special lines, there has been a noticeable lack of imitators. Why this should be is a little difficult to say. It would seem as if every city of 100,000 people—and there are probably a score of such in the States—could support its own children's photographer. And yet photographers are not forthcoming to bid for exclusive business.

His studio is fitted with a couple of cameras, chairs, and a few backgrounds. The usual accessories are absent, but the place overflows with toys. Toys are a wonderful introduction, and with toys and E. B. Core working in conjunction there is a combination which few children can resist. If the real skin bear cannot emit growls which are sufficiently distinctive, Mr. Core will oblige with a real live impersonation. The first interest is the interest of the child; and in gaining this the natural dignity which many children possess must be appreciatively considered. Some children will work loyally with the photographer, while others are full of a mischievous determination that no picture shall be taken.

The Method.

An assistant is placed at the camera to change plates and attend to details—often to make the exposures. Mr. Core is thus enabled to devote all his atten-

tion to his subject. Many a little active resister has left the studio confident that his efforts had been successful, little dreaming that ten or a dozen exposed plates have been passed on to the developing room. Mr. Core finds it good policy to make a fair number of exposures. His price for a dozen cabinets, from two negatives, is twenty dollars. A wide range of proofs often leads to orders from more negatives, which means an increased price and helps to increase the total number of prints ordered. And a considerable choice of pictures is necessary to a profitable specialty of Mr. Core's, viz., a large sheet of paper on which a number of poses of the little subject are delicately vignetted. Mr. Core has but one relaxation of his rule "children only" Where necessary to the success of the picture he will include the mother.

The Stamp of Personality.

E. B. Core and Pirie MacDonald are one in their insistence on the individuality of the American photographer. All the work which leaves his studio must be recognizable as his work. The printer may do the best grade of work, but if he has any style or preference of his own it must be subordinated to the style of the studio. Core gets the credit for a good photograph, and he gets the blame for a bad one, and so he is the one man responsible through every stage of procedure. The finished work is his, and must be so distinctively his that the lay patron will recognize it as such.

Fraternity.

Mr. Core is appreciative when speaking of the English professional; but then he is always quick to see the best in anyone's work, and he would rather praise another than speak of himself. Five years ago he filled the office of President of the Photographers' Association of America. The annual meeting that year was stamped with the personality of the president more than any meeting before or since. The convention, which was wont to be a huge social gathering with a strong competitive exhibition of photographs, was turned into an "educational convention." For that year medals were abolished and photographers asked to hang their pictures for honor only. As a result the show was strengthened; for many men of assured position, who declined the chances of competing for rewards, agreed to send a display of their best work. For those who looked to medal-awarding as a gauge of the quality of their work, another aid was offered. Where desired, two men, a painter and a photographer, wrote brief criticisms of an exhibit, and these criticisms were handed privately to the authors of the pictures. The speakers for the year chose subjects of distinctly educational value, and the profession at large approved the experiment. It was a practical demonstration of a healthy belief in the value of fraternity.

FLASHLIGHT POINTERS.

It is not necessary to turn down other lights in a room when taking a flashlight portrait.

When conducting flashlight portraiture at home look out for unexpected reflections from mirrors, pictures, etc.

Flash mixtures should be burnt on a tray or tile. If placed on gun-cotton the flash will be practically instantaneous.

An electric fan is a useful accessory for the flashlight photographer. It assists in clearing the smoke very effectively.

In addition to the flashlight no extra apparatus is required by the flashlight photographer beyond reflectors if portraiture is attempted.

A sliding music stand with an improvised flat-top or a tall pair of steps can be recommended as useful for placing the flashlight sufficiently high.—*Photographic News.*

GOOD MOUNTANTS FOR PHOTOGRAPHS.

BY A. J. JARMAN.

THE mounting of a photograph seems to be a matter of very small importance when compared with the skill and labor concerned in the production of the photograph itself. Many thousands of photographs of merit and excellence, only too many, that can never be produced again from the original negatives, have become ruined and almost obliterated for want of correct knowledge in the preparation of a good and reliable mountant. To many, the only thing that is required is something that will stick, no matter whether it is gum, glue, or gelatine, all of which have been used for the mounting of photographs. If any of the above substances have been used for the mounting of silver prints by the extreme edges, it has been found invariably that the print has changed color considerably, or has become very much faded in those parts where these mountants have been applied. The many impurities contained in common glue, the acid tendency of gum and the tendency to fungoid growth of gelatine when kept in a damp condition all contribute to and cause the fading of a photograph made with the organic salts of silver.

The materials that are employed at the present day for making a paste or mountant for photographs differ considerably according to the fancy of the photographer. A mountant that can at all times be depended upon, which will not change in its general qualities, and not subject to the various processes of fermentation when in either a wet, dry, or damp condition is still a desirable commodity for all kinds of photographic mounting purposes.

There have been recommended from time to time compounds of gelatine with starch. The writer knew one photographer who used fish glue exclusively for his edge-mounted pictures. A compound of starch with sugar is also employed. Though some photographers employ ready prepared pastes, there are others who use a paste made of flour only, while the majority of photographers without doubt use a freshly prepared mountant of starch.

It is in this daily made starch paste where the main danger lies in producing the mountant that is likely to become sour through the setting up of acetone fermentation and cause the rapid fading of a silver print. The cause of this is because there is no hard and fast rule for preparing the paste. All pastes and mountants that are to be relied upon for photographic use *must* be thoroughly cooked and contain the addition of some reliable antiseptic, so as to prevent fermentation and not interefere with the adhesive qualities of the material used in the preparation.

A well-made paste of starch used in a fresh condition is fairly reliable; but it must be remembered that from the moment that such a paste has become set and cold, slowly but surely acetone fermentation begins, which after the first day continues rapidly, especially in hot weather, when, if for no other reason, it must be thrown away because of its offensive odor.

A well-cooked flour paste will keep in good working condition longer than a paste made with starch. For the benefit of those who wish to make a mountant that can be relied upon to possess all the desired qualities of a first-class paste, one that will not turn sour and possess keeping qualities and adhesive properties that will not change in a

year, the following formula will meet the requirements:

Best wheat flour	5½ ounces.
Common white starch	1½ ounces.
Cold water	20 ounces.

Mix the above into a thin paste in the inner vessel of an oatmeal kettle, place some water in the outer vessel, and stand upon a gas stove to boil with the inner vessel adjusted.

Dissolve in BOILING water (about three or four ounces by measure) sixty grains of salicylic acid, add this solution to the flour mixture in the kettle, stir the mixture with a clean wooden spoon and continue the stirring without stopping until it begins to thicken. The stirring must be carried on for several minutes after the thickening has taken place, about five minutes is the right time. This is to enable the material to become cooked. If found to be too stiff for stirring, add about two ounces of *boiling* water and stir well until the admixture is complete, remove the kettle, lift the paste in the centre by the wood strip, and add from eighteen to twenty drops of oil of cloves, thoroughly stirring the mixture once more so as to completely incorporate this essential oil. Then scrape the paste into a large clean basin and continue the operation until four or five batches have been made. Allow the paste to cool off, then squeeze it through cheese cloth into a stoneware crock of the capacity of (say) one gallon and a half and cover with the stoneware lid as supplied with the crock and the paste is now ready for use.

The working of this paste will be found to be extremely smooth, and in adhesive quality cannot be surpassed. In place of the starch, one ounce and a half of *white* dextrin may be used. Do not use the yellow variety because this discolors the paste.

The above mountant will enable a print to be removed, in case of need, after a prolonged soaking in cold water and then in hot water for a few minutes.

This mountant is the one the writer has used for years for all kinds of photographs, whether in silver, platinum, or carbon, and also for bromide enlargements in size up to forty inches by seventy-two, and upon every kind of cardboard.

As a preservative for paste to be used as a mountant for photographs salicylic acid has proved to be one of the best. If this preservative is used in combination with starch, it causes the paste to become pink, and shows in a decided manner should a little of it ooze at the edges of the print.

The next best mountant is made by the addition of from thirty to forty drops of a 40 per cent. solution of formaldehyde to every two ounces of starch where the starch has been mixed to a stiff consistency in cold water. Then by adding boiling water and stirring well into, the starch thickens, and continue the stirring until thorough incorporation is assured, and when cooled down squeeze through cheese cloth. This will give a good quality mountant that will not decompose, but if a print has to be removed from a mount when this paste has been used, it will be more difficult than with the paste already described. When this starch paste becomes set it is as clear as gelatine, and becomes almost insoluble in water.

Another mountant can be made by using wheat flour alone, as follows:

Best wheat flour	4 ounces.
Water	10 ounces.

Dissolve in another ten ounces of *boiling* water fifteen grains of salicylic acid; add this to the flour mixture, and boil in the oatmeal kettle as already described. When cooling down, add twenty drops oil of cloves, mix well and squeeze through cheese cloth. Many years' use of the No. 1 formula has proved it to answer every requirement the photographer can devise.

SOME OBSERVATIONS ON CARBON PRINTING.

BY F. J. MORTIMER.

THE increasing popularity of carbon printing is becoming manifest every year amongst photographers. But even now the process does not appear to have entered into that state of universal acceptance that is its due.

We do not suggest, of course, that it should be used on every occasion, nor yet will it ever hope to compete with bromide and gaslight papers on the score of printing by artificial light, but on all occasions when daylight is available for printing, and reasonable care, thought and time can be bestowed on the production of the picture, it is not always obvious why it is not employed.

Arguments Against Carbon.

There are two reasons that are usually put forward by amateurs who have had the process brought to their notice but who have not extensively used it. One is that the image is invisible while printing, and danger of wrong exposure is consequent, and, secondly, the lack of keeping quality of the sensitized tissue is regarded as a disadvantage.

The first objection we cannot look upon as a legitimate excuse for not employing carbon, because there are many other processes in general use—notably bromide and gaslight papers—in which the image is invisible during printing,—and, moreover, the extended period necessary for carbon printing and the nature of the subsequent treatment allows of far greater latitude.

It is also sometimes argued against single transfer carbon printing that reversal of the image is a drawback. This may be so in some cases, but under most circumstances if the result aimed at is purely pictorial and not topographical, reversal should not affect the composition in any degree, while it cannot be denied that the development of a single transfer print is no more difficult than the development of a bromide print.

It is the keeping quality of carbon tissue, therefore, that we must assume proves the obstacle in the way of many would-be carbon workers.

Opened packets of P. O. P. gaslight or bromide paper will be left unattended in odd corners or on dark-room tables for days or weeks, and because it is stated that the product will keep well, no special precautions are deemed necessary, and as a result faulty prints occur with blemishes for which the makers get the blame.

On the contrary, sensitized carbon tissue has acquired the reputation for needing very special care if it is to remain in good condition, so the selfsame amateur regards it with suspicion, and generally decides not to be hampered with a process that requires any extra attention.

Keeping Qualities of Carbon.

The foregoing observations must lead one to the consideration that the question of keeping sensitized carbon tissue is the important one. Under normal circumstances—which means with no special precautions—the tissue will keep for about a fortnight in dry weather after it has been sensitized. Damp weather, such as the present season of the year may lead us to reasonably expect, will have a decided effect on the keeping quality unless considerable care is taken. Every carbon worker, however, should be aware that sensitized

tissue can be kept before printing for months if properly stored, and for an equal length of time after exposure if treated in a similar manner. The well-known continuing action that goes on after printing appears to be only possible in the presence of moisture. By the entire removal of moisture and by keeping the tissue under pressure in an absolutely bone-dry storage box the material for carbon printing can be preserved for six months at least, and always ready to hand for immediate use.

Sensitizers.

Many workers prefer to sensitize their own tissue, buying it in the insensitive condition from the makers. Here, however, the necessity for sensitizing every time a small quantity is needed is repellent to the type of amateur we mentioned above, so the purchase of newly sensitized tissue and a proper storage box is advocated. If, however, the purchase of the insensitive tissue has been made—probably on account of the greater range of colors offered—we can recommend the following method of sensitizing for the production of a tissue that will keep a comparatively long time. The formula has been put forward by H. W. Bennett, who gives his method of working the carbon process in this year's *Year-Book of Photography*, (sold by G. Gennert, New York), which our readers should consult for further particulars. This sensitizing solution gives tissue which not only keeps in working order a considerable time but also gives prints of marked brightness and vigor.

Make up the following:

Potassium bichromate	4 drachms.
Citric acid	1 drachm.
Strong ammonia	about 3 drachms.
Water	to 25 ounces.

The potassium bichromate and citric acid should be dissolved separately in hot water, the two solutions mixed and sufficient strong ammonia added to change the color from orange-red to a distinct lemon yellow. The quantity of ammonia required will be approximately that given in the formula. It is very important that the ammonia should be added immediately after mixing the two solutions.

The sensitizer should be used cold; will keep indefinitely, and may be used over and over again. The tissue can be sensitized in full daylight, and is insensitive while wet. It is most conveniently sensitized by complete immersion for about two and one-half minutes in the above solution which should not be of higher temperature than 60° F.

An Alternative Formula.

Another sensitizing bath recommended by G. T. Harris, is one containing sodium citrate. It is as follows:

Potassium bichromate	2 ounces.
Sodium citrate	120 grains.
Water	60 ounces.
Ammonia, .880	1 drachm.

Experiments with tissue sensitized in this bath prove that the keeping qualities, even in damp weather, are greatly increased. The tissue was placed in an empty tin without any special precautions, such as pressure and rubber bands to exclude air, and after keeping a month it was printed, development taking place readily with water of medium temperature. Tissue sensitized in the ordinary bichromate bath and stored under similar conditions would have been insoluble in a fortnight.

Drying and Storing.

After sensitizing, the best method of drying the tissue, at any time of year, but especially if the weather is at all damp, is to squeegee it on to a ferrotype plate. The plate can be put up to dry in a current of air in subdued daylight if necessary. The yellow color conferred by the bichromate is sufficient to protect the tissue from the diffused light of an

ordinary room while the plate itself secures it from any pernicious vapors. The tissue should peel off in about five hours, and when stripped is perfectly flat and with a surface free from dust or other foreign matter. When sensitized it should be placed in a box and kept chemically dry and under pressure by means of a flat piece of metal and a strong spring. A perforated box or separate compartment containing calcium asbestos wrapped in cotton wool will keep the air in the box perfectly dry.

A flat box should be used, for if the tissue is placed in a round platinum tube it will coil up in a tight roll and be quite unmanageable. (George Murphy Inc., New York, supplies a proper storage box for the purpose, and in it sensitive tissue can be easily kept in good condition for six months.) When taken from the box the dry tissue must be exposed to the air for a time—in darkness, of course—to absorb sufficient moisture to render it pliable before placing in the printing frame; otherwise the extreme dryness renders it very brittle and difficult to handle. Prints that have become dry in this manner require longer time in the cold water before they are in condition for squeegeeing to the transfer paper.

The Continuing Action.

In damp weather the prints must be promptly returned to the dry storage box unless they are to be developed at once; otherwise the continuing action will go on and the tissue will be rapidly rendered insoluble. It is necessary, therefore, to carefully exclude light other than that which reaches the print through the negative when the tissue is to be kept some time before development, especially if the prints are taken from the frames before they are sufficiently printed and advantage is taken of the continuing action to bring them up to full density.

By leaving them exposed to the air in darkness, under-exposure, due to bad light or lack of time, can be to a certain extent compensated for. Twelve hours will about double the effect of exposure, and so on up to forty hours, when the exposure effect will be increased about eight times, but much depends on the condition of the tissue and the humidity of the air.

A print produced under these conditions will be harder in contrasts than one fully exposed under a negative to light. It should be remembered, however, that if the air is so damp as to make the tissue downright wet, the action ceases altogether. Duchochois advises that if the exposed tissue is washed and sponged after exposure, and then thoroughly dried, the continuing action does not take place.—*Photographic News.*

THE POSING CHAIR.

BY W. FOSTER BRIGHAM.

[THE following plea for the abolition of the "posing chair" is taken from the *British Journal Almanac* for 1907. G. Gennert, New York, American sales agent. We must admit the impeachment in the third paragraph—we know the studio in question and we must confess that there are many others.—ED. W. P. M.]

What horrible memories that title would call to the mind of those who suffered under the hands of some of the earlier photographers. No wonder we hear the "dentist joke" (?) from

ninety-nine out of a hundred sitters who in their early days have known the elaborate monuments to perverted ingenuity that appeared as helps for the portraitist. Let us hope that the newer generation will have no cause to make the same painful comparison.

The form that these marvellous pieces of cabinet-making took was either that of a chair and head clamp combined, still used in some studios to this day, or they were provided with raising, lowering, tilting, and swing motions that recalled only too distinctly the plush cover hiding the steel mechanism of another piece of professional furniture of dreaded and dreadful memory.

That this latter type is not yet as extinct as might reasonably be expected, considering the enlightened methods now prevalent under the skylight, is proved by a photograph that recently appeared in the *British Journal of Photography*, showing the interior of a studio situated in progressive go-ahead America.

We trust that in this age it is unnecessary to once more appeal for the banishment of all such trash in the name of all commonsense and natural photography. If it is, let us say once more throw out of your operating room another heritage of the dark ages any furniture that is not that of an unphotographic household. With four or five ordinary chairs of varied pattern, everything necessary for securing natural poses and expression is at hand. Straight-backed chairs with very little, if any, slope to the back support are the most useful for heads and, indeed, most positions. The other kinds may feel more comfortable, but the photographic results of the positions taken in them is undignified and ungraceful.

When photographing the head only, the back should not be seen. This is easily managed if the body be posed full, but many of the most beautiful turns of the head are secured when the body is in three-quarter, side, or back view, and in these positions the chair back would either entirely prevent the pose being made or it would show and be ugly and obtrusive.

To obviate this we use a square four-legged music stool without raising mechanism. In many instances this seat is rather too high for the sitter and a footstool is necessary. This, however, is an advantage, for it is an easy matter to supply a rest of exactly the right height by using one, two, or three large volumes. Moreover, by putting the rest under one foot only, the position of the shoulder is altered without drawing the sitter's attention. Raising the foot usually lowers the shoulder on the opposite side. Some sitters, who are rather limp, must be carefully watched or they will sink all of a heap when they are debarred from the support of a chair back.

If one cannot get over this they will be better taken standing, in common with a few other types of sitter. It is advisable, however, to place them behind a high-backed chair upon which they can rest their hands, gaining support and maintaining the same position, for a slight forward or backward movement of the head will spoil the focussing.

For three-quarter and full-length poses the arm-chair is generally preferred to the single. They must, however, be slight and unobtrusive. A saddle-bag or spring-upholstered chair is unsuitable. Only the seat should be stuffed, the back and arms being frame. When selecting the chair before exposing see that it is of suitable height, the general fault being selection of a too low seat; that causes the sitter to have that limp, humped-up look we have referred to before. For child photography, smaller chairs should be available, the backs being the chief worry. A very narrow low back is alone service-

able. Seated on the head stool, these small sitters are apt to sink down and look humped-backed; for all that we use it more frequently than any other.

A useful dodge is to paint children's chairs with a brilliant enamel, say, light blue for light, and segral red for dark. The bright colors attract and please very small folk.

When two or three heads are to be posed we use a form or a small upholstered ottoman; there being no back or arms the correct position of the bodies and the requisite proximity of the heads is easily obtained. For large groups, besides footstools and the music stool, it is advisable to have something between the two. For this and many other purposes we find a square box, about one foot all ways, extremely useful.

A very effective accessory that perhaps scarcely comes under the heading of this paper is an imitation sloping bank. One foot from the ground where it touches the background and merging into the floor about four feet from it are good proportions.

If made ruggedly of paper mache and covered with imitation grass, or painted to represent rock, it makes a suitable and natural seat for children, or it may be used for excellent and unconventional groups of grown-ups. Very many famous painters have made use of a sloping bank to produce taking poses, and many examples could be instanced. One that most photographers will be familiar with is the portrait of a child, by Sir Noel Paton, that is used as an illustration by the late H. P. Robinson in his *Pictorial Effect.*

EXPRESSION AND LIGHT.

BY ANTONY GUEST.

In a recent article the above words chanced to come together, and it seemed that their association was happy, for it would be difficult to invent a combination that more completely sums up the qualities which should be the special aim of the artistic photographer. Expression gives vitality to his work; light imparts the appearance of Nature. In considering these two essential characteristics of all good pictorial, as distinguished from decorative, work, it is well to bear in mind the great breadth of their scope. Expression marks small things as well as big, still-life and humanity, the sentiment of Nature, and, what is of no less account, the mood of the artist. The poise of a chair, the spring of a bough from a tree, the dreary solemnity of winter, the brightness of spring, and the personality of a man or woman, all have significance which is to be rendered by a negative no less than by a positive process, namely, the rejection of such matters as do not in themselves aid in conveying the particular idea that it is desired to produce. It is not that details should be ignored merely on the ground that they are not suggestive, for all things have expression; it is because they do not always express themselves helpfully to the main intention. No passengers or stowaways are wanted; all the crew must be working units, and things that do not add vitality to the artist's sentiment or his theme are encumbrances that may be thrown overboard.

In a general way, it may be said that details are the enemy of expression. Among their abundance there are few that help, and for the most part they are

so much weight carried to no purpose. But some are significant and valuable, and it is necessary to search for these and to select them with as much discriminating regard for their usefulness as a traveller would apply to the contents of his knapsack. If their weight or bulk is more hindrance to the attainment of the end in view than they can compensate for by their assistance, they must be discarded. For instance, if one desires to enforce the brilliance of sunlight, one need not have a pair of sparkling eyes in the foreground; and, conversely, if one is stirred by the radiance of a pair of eyes, and longs to represent them in all their witchery, there is no need to place a stream of sunlight in competition with them. To do so would be to weaken, probably to destroy the effect desired. This, it may be said, is an extreme instance; but in other cases there is only the difference of degree, and the principle applies throughout the whole range of pictorial art. Details either help or hamper the paramount idea; the point is to ascertain exactly what their influence may be before accepting them or throwing them over. Some artists will tell you that they feel this influence without precisely weighing it; but this is a dangerous test for such as have not cultivated their artistic sensitiveness to a very high point.

Details in pictures may be regarded in much the same way as ornament in architecture. Ornament is appropriate when it emphasises and beautifies the lines of construction; but the structure is the important thing, and if the decoration hides it, or claims attention merely on its own account without reference to its mission, it becomes superfluous, and, therefore, detrimental to the whole.

It is the structure rather than the ornament that tells, and this reminds me to point out that expressiveness must be sought beneath the surface of things. The overlay of detail often masks construction, but should not be so accentuated in the picture as to prevent the construction from being felt. Especially in portraiture is it necessary to make the accidental folds of the clothes subservient to the natural lines of the figure. This is a matter that I am afraid is too often overlooked and the consequence is that many portraits, apart from the faces, are mere representations of clothes, instead of, as they should be, renderings of the draped figure. Of course, one need not try to emphasize the figure so completely as the Greeks did with clinging garments, rendered more clinging by being damped. But the figure should be expressed even when in modern attire, and this can be done partly by eliminating misleading lines in the draperies, and partly by cherishing such natural lines as are actually defined. The expression of the figure should accord with the expression of the face.

At the same time it may be suggested that photographers who take up portraiture should give some time and perseverance to the study of the nude, for unless they understand the construction of the figure it is difficult to see how they can give it due expression. No doubt they regard the face as more important; but here, again, it is necessary to look beyond the surface and to note the structure. It is not so much the superficial, and perhaps accidental marks, that give expressiveness to a face as the permanent formation of the bone. But this is a matter that I referred to quite recently, and need not dwell on now. The point is, that expression is found beneath the surface. The structure of a tree must be looked for under its covering of foliage, and the mood of Nature is felt apart from her many bewildering details. To get at the individual, one may often have to forego a variety of plausible super-

fluities. At least the portraitist is on safe ground when he devotes his attention to what is enduring, and refuses to rely absolutely on exterior adornments or defects. If he has a penetrating and sympathetic vision he may reveal an indication of the underlying spirit.

But the artist must also express himself, for in this way he divests his work, whatever it may be, of its mechanical quality and gives its temperament. He need not trouble himself much about this, for he is certain to make his work as characteristic as his hand-writing if he avoids the two pitfalls, imitation and timidity; not copying other workers' styles and having the courage of his own convictions. So he will assert himself unwittingly. It is only when there is a conscious effort at self-expression that it degenerates into affectation. It is scarcely possible to lay too much stress on the importance of the individual outlook of the artist. The expression of Nature is often subjective, depending on the mood of her interpreter. Two men may represent the same scene and their pictures may be absolutely different yet equally true, because they each reflect a particular mood or temperament. One picture may be gay, the other melancholy. One may be a joyous revel in the beauty that exists; the other poetical, mysterious, and restrained. An autumn day may cause one artist to rejoice in the feast of color, and another to repine at the presage of winter. In either case the mood will claim sympathy if it is decidedly expressed; but, as already remarked, if this is to be done, an elimination of such matters as do not help to convey the message and make it clear will be necessary.

Expression is, of course, closely allied with treatment, for the completeness with which an artist succeeds in conveying the spirit of his theme depends much on sympathetic handling. One does not want dainty workmanship in the representation of grim rocks, and such bold, rough handling as would be justified in their case would not be appropriate in a picture of flowers or children. The nature of the subject calls for a corresponding feeling in the technique, so that not only the rocks but the whole picture may convey a rugged impressiveness in one case, and in the other the sense of refinement may be aided by endowing the work throughout with delicate manipulation and tone. Such harmonious relationship between subject and treatment adds to the completeness of the whole and strengthens its effect.

Some think to drive their statement home by the aid of vigorous contrast, and may go to the length of representing a lily with a black background to enforce the whiteness of the flower. But for a picture to excite pleasing emotions and to claim recurrent attention we want harmonies, not contrasts. Contrasts astonish, but only for a moment, and when the surprise has subsided there is no insinuating and lasting appeal such as is found in a quiet design that the eye can rest on. This brings me to the consideration of light as an aid to expression, for if there are violent contrasts of light and shadow their clamor is very likely to drown instead of strengthening the sentiment that the artist wishes to perpetuate. It may be said that the whole idea is to render the effect of a brilliant light opposed to a dark shadow; but, even so, it will be found necessary to modify the contrast, for the light has color and the shadow has mystery, and these qualities, further influenced by atmosphere, are not to be obtained through mere black and white. They demand tone. The lily may be in sunlight and the black fence behind it in shadow, but neither can escape the harmonizing veil of atmos-

phere and reflected color. Nature's contrasts, though it may sound paradoxical, are all harmonies; in fact, she works for harmony, and those in sympathy with her will aid her effort and not endeavor to force her into unusual contrasts of light and shade.

Light is made expressive, not by contrast, but by being used in the appropriate place. Nature defines light, all things in light, but the artist exercises discriminating selection, for he has to think not only of the virtues of light as a means of definition, but also of its decorative influence on composition and its aid in insisting on the paramount interest of the leading subjects of his theme, and this insistence he will wish to carry out with graceful urbanity rather than by glaring advertisement, remembering, too, that if the highest light is employed on a matter of secondary significance, this immediately assumes an importance that is more than its due.

Natural light is distributed without any such forethought, and it is in supplying the selectiveness and economical treatment omitted by Nature that Art has its mission and the feeling of the artist finds expression; forming a happy partnership between man and Nature, one bringing the brains and the other the capital, each influenced by the other, and both gaining something from the combination.

Not only the high-lights but also the more subtle shades are full of meaning, and it should be remembered that when we speak of light we necessarily include shadow, its inseparable adjunct, for the character of light is explained not by the illumination but by the shadows. In this way are expressed the fundamental conditions of a scene—diffused daylight with no strongly-marked contrasts of light and shade; moonlight, with delicate contrasts; the degree of intensity in sunlight, which is recognized by the comparative strength of its shadows—the full sunlight of midsummer by well-marked shadows, always, however, transparent and modified by the reflection of the sky; the weaker sunlight of winter by slight shadows very refined in quality. The strongest shadows are those produced indoors by artificial light, for there is no sky to reflect light into them and subdue their density. So light will express the season and often the time of day; but it also has a sentimental expressiveness. The sparkle of sunshine gives gaiety to a theme; subdued lights suggest thoughtfulness and repose and low tones may tend to melancholy or may help to promote a feeling of awe. Evidently, therefore, the artist has great possibilities of strengthening his message by the discriminating use of light, and this is a matter that I think deserves the more consideration since I have noticed a growing disposition to produce low-toned pictures without much regard for the particular sentiment that ought to be conveyed. The portrait of a bright young girl or a studious old man, sunny and cloudy landscapes, are often in the same low key, showing that the artist has not thought of the expressiveness that might be gained from light in one case or the other.

There is one other matter that ought not to be overlooked in discussing expression—the great value of simplicity. The plain, direct statement, unhampered by side issues, is that which makes its meaning clear and unmistakable. This, with the assistance offered by light, with the piquancy of personal handling and with the adornment that comes of a decorative sense, is what pictorial photographers should aim at in producing expressive and effectively illuminated work.—*Amateur Photographer.*

THE CHILD MODEL IN COMMERCIAL PHOTOGRAPHY.

So great has become the demand for child models in the last few years that, according to a New York photographer, almost any pretty child can command an engagement. It not infrequently happens, says he, that the support of families rests upon small shoulders, and cases in which children earn sufficient not only for their maintenance and clothing, but also for their education, are plentiful.

It is perhaps in the line of commercial photography that the best field for child models lies. Commercial photography supplies pictures for advertising the product of business and manufacturing houses. Children who pose for these illustrated advertisements earn anywhere from $12 to $14 a week and sometimes, as in the case of Ruth Wells, $25.

While children from 2 to 4 years old are most in demand, those from 4 to 10 can be used in one way or another. Another branch of photography in which child models are used is that in which beautiful pictures, ideal heads and the like, are sought. These are sold to art dealers for reproduction.

The demand for child models is not so great among artists as among photographers. It is somewhat difficult for the little ones to pose as steadily as is necessary for an artist, but before the camera they can be taken in a moment in all their simplicity and sweetness and they are not fatigued by the effort.

Girls are much more desirable than boys. Out of the fifty best known child models in the city not more than one-quarter are boys.

When asked what the requirements of a child model are a photographer said:

"Beauty is, of course, the primal requisite. While the infantile type is preferred by many, the piquant child has many admirers.

"Girls, particularly blue-eyed tots with curly golden hair, snub noses, dimples and round chubby faces, are eagerly sought, as they make pretty angel heads and are particularly adapted for ideal pictures for art and commercial purposes. They must be plump.

"Little girls with straight locks haven't the same chance of getting employment as those with ringlets. To some children posing is as natural as breathing. They fall into graceful postures very easily. Others are naturally awkward despite their pretty faces and winning ways.

"As to the remuneration which these little artists receive, it varies to no great extent from that received by their older sisters in the business. An hour's posing generally brings from $1.50 to $3, and after an hour's work the average child is generally too tired to sit longer, though Ruth Wells, one of the noted child models of the city, can pose for two hours steadily without getting weary.

"It is understood that the children shall furnish their own costumes, unless it is a character costume, in which case, perhaps, the professional costumer will be called in. Most of these children have good wardrobes of simple, dainty gowns used expressly for professional engagements. But the other day a dirty but undeniably pretty Italian child was brought in here by some one who picked her up in the street.

"A very soiled and ragged cotton dress barely covered the little one's nakedness, but there was a charm about the kid that was simply irresist-

ible and so I took her just as she was. The picture will be used for a dyeing and cleaning establishment, and it will be a winner, if I mistake not. But that is the exception that proves the rule, of course.

"I am beseiged with applications from mothers who wish me to use their children as models, and while some of the children, nearly all of them I might say, are pretty in their own childish fashion, few of them are sufficently artistic or picturesque to be made use of. If a child possesses those qualities and in addition can take poses naturally and prettily, there isn't a doubt that she can find plenty of work.

"If a mother has a child of whom she wants to make a model and the little one is of a nervous temperament I should first advise that the child be put through a course of gymnastics or physical culture until she gets hold of herself and is able to control her muscles and nerves. Exercise of this sort is an aid to grace and makes posing less tiresome.

"Most children love to pose and I have frequently seen children cry when is was time for them to leave. Others sometimes have tantrums when asked to sit before the camera, and it is only after all sorts of promises of candy, toys and the like that they will consent to pose.

"The idea seems to frighten them and if they cannot be soothed I always advise the parent to stop forcing the child at that time. If at some more auspicious moment the little one takes to the idea in a pleasant mood, then the attempt may be made again, but the idea of using the child as a model should be abandoned if it makes the little one nervous.

"Child models reach the awkward age the same as other children, and one of the most pathetic sights I have ever witnessed was when one of these children, after having posed successfully for half a dozen years, finally reached the hobbledehoy stage when to assume a graceful attitude was manifestly impossible, and poses that once were simple and pretty were difficult to assume and ugly to reproduce because of the consciousness of the child.

"One case I have in mind was that of a dear little girl who had been the main support of a widowed mother. Once working for more than an hour to get her to take a pose that formerly she would have thought nothing of I was obliged to abandon it. She cried as though her heart would break, for I had to tell her that the knack was gone and her days of posing were over until she attained womanhood.

"Among the child models of the city who have become known by reason of their grace and beauty are Ruth Abbott Wells, now 7 years old, who has posed since she was a mere baby; Lora Palmer, who does a good deal of fashion work, posing for children's hats and gowns for commercial photographers; Ruth Graham Beryl Morse; Martha MacGraw, who is a member of Maude Adams' company and is well known as a model; Le Roy Scott, one of the few good boy models; Sylvia Nathan, and Vivian Martin. There are perhaps half a dozen others who are successful and whose faces are familiar to the public.

"Ruth Wells began earning money when she was 2 years old, and by the time she was 2½ she had money in the bank. She is a famous dancer, and in spite of her charms and the adulation she has received, is not one whit spoiled. One of the most attractive pictures of Ruth ever placed before the public showed her perched on the shoulders of Santa Claus, a model of 72—the oldest and youngest models at that time in New York City.

One hardly ever stops to think, when one sees a particularly attractive advertisement showing a dainty young child, that some artist's model sat for that picture, but as a matter of fact few of the children's pictures noted in turning over the advertising pages of the magazines are ideal types; they are taken from life. Some pretty child model sat for the study, and the background, showing perhaps the specialty advertised, is from a still-life study.

"Commercial photography has become a great art and the field is ever widening. Consequently there will be an ever-increasing demand for tiny folk with artistic faces and forms to pose for such studies."—*N. Y. Sunday Sun.*

CARBON TRANSPARENCIES.

BY ERNEST HUMAN.

By transparencies I refer, in this article, more especially to lantern slides; at the same time, what is here written also applies equally to all classes of transparencies, be they large ones for framing, slides for the stereoscope, or for the making of enlarged negatives.

It is strange that so much has been said and written upon the advantage of using the carbon process when making transparencies for use in making enlarged negatives, and yet *so little* upon its use for lantern slide work, most text-books and writers passing the subject over with two or three lines. Further, although our trade workers almost invariably use the carbon process for the production of large negatives they almost as invariably send out transparencies made by any and every process but carbon, except where specially stated on the order. Why is this? Is it that they use the process that first comes to hand when doing this class of work; or is it that the photographic public will not have carbon work? That silver does not yield nearly so good results as carbon goes without saying, though I do not intend to infer that good lantern slides cannot be made by the use of the many brands of lantern plates in the market. Far from it. At the same time there is no process that yields the best results with such ease and certainty as the one under consideration; no method that is less likely to yield a transparency that is not good, and that at the same time is accepted, to save trouble, as good enough. Further, the very mention of the word carbon to most workers simply gives them fits, and one who knows the process is almost inclined to also have fits, *of laughter*, at the look of horror upon the face before him, knowing that the whole thing is so simple, as he does.

The tissue may be obtained either ready sensitized or not, according to the time it is likely to be kept by the user. Sensitizing is, however, so easy that no one need fear to undertake it and sensitize his tissue one or two days before he intends to use it. This course will give him the advantage of being able to prepare just the number of sheets wanted; and, moreover, he can stock and prepare various colors, and thus there is no need for one to be somewhat bound down to one color for one day's printing.

The real trouble is that of drying the tissue, after the bath, and the following hints may be found useful. The sensitizing bath is prepared as follows:

Water (distilled for preference). 10 ounces.
Potassium bichromate..... ½ ounce.
Ammonia (liquid), .880.....3 drops.

The cut tissue is immersed in the solution for thirty seconds, taking care that no air bells form on the surface. It is then drawn over the edge of the dish and laid upon a sheet of glass or zinc and lightly squeegeed (*with a flat, not roller squeegee*), to get rid of the surplus moisture, and hung up to dry, using either wooden clips or pins. The solution should not be over 80° F., but, on the other hand, the tissue may be allowed to remain in, in winter, for from forty-five to sixty seconds. It is best dried in a room in which a fire has been burning during the day. The sensitizing being done at night by gas or lamplight, the tissue is hung near the fireplace, pinned to a clothes-horse or to the edge of the mantelpiece, the clothes-horse being, say, five or six feet from the fire—it will be dry, ready for printing in the morning. The blinds must, of course, be drawn to exclude all white light. The *great point* in drying is to watch that it does not take too long; if it does, trouble in stripping is likely to result.

Another point that frightens amateurs is the coating of the glass with the gelatine substratum. This is not necessary —neither is the operation of coating the tissue with collodion that is sometimes recommended—both these are intended to prevent the delicate high lights from being washed away during development. Whether they do so or not is an open question. I have used the tissue with and without collodion, the glass with and without the substratum, and with and without either or both, and I have failed to find the supposed difference that is said to be shown, or any fault that could be put down to the non-using of, or any advantage that I could trace to the using of either the substratum or collodion.

It may be that I always keep my tissue some two or three days prior to using. If this is so, I see no reason to deter others from doing the same. It certainly is in better working condition, if kept this length of time after sensitizing provided always that it is *kept perfectly dry.*

The great thing is to have the glass chemically clean. The tissue after exposure to light (with the usual safe edge—using either a print meter or another negative as a guide to printing, *i. e.*, a negative of as near as possible the same density, with a slip of P.O.P. By the time the P.O.P. is printed *to finished not toning depth*, the tissue will have had sufficient exposure), is then soaked in cold water until it has become limp, the glass is then slipped under it, and both withdrawn together, the face of the tissue being in contact with the glass; it is next well squeegeed to get rid of any air-bubbles and put under blotting with a slight weight for from fifteen to twenty minutes.

The time passed, it is placed in warm water, and when the gelatine begins to ooze from the edges freely the paper is stripped off and the warm water gently laved or splashed over the print, which is now on the glass, until the excess of gelatine is removed, this being the development. When fully developed it is placed in cold water for a short time to chill the gelatine, and then given from three to five minutes in an alum bath, and finally washed for, say, five minutes and put aside to dry.

When dry all that remains to be done is to mask and bind up as usual, but remember that the print, being reversed, the spots which mark the side to be placed next the condenser *must be placed on the glass side of the slide itself*, and not, as is usual, on the cover glass.

As a final word, may I say, never use the cushion-shape masks. For slides they are a mistake and never should be used. *Square corners, please.—Photographic Chronicle.*

TRADE NOTES.

NEW SECTOR SHUTTER. After some years of experimenting and perfecting, the C. P. Goerz American Optical Co. have placed on the market their new model of the X. L. sector shutter. Some few days ago we had an opportunity of examining one of these shutters. It is a very fine piece of mechanism and is destined to become a very popular instrument. In appearance it is a very neat and compact shutter, perfectly circular in form, the usual side pumps having been eliminated. The working parts of steel and brass are contained in an aluminum casing, the front cover of which serves only as a dust cover and carrier of the front combination of the lens. The shutter can thus be worked in all its adjustments with the front cover removed. No other shutter possesses this feature which insures a perfection of assembling and adjustment of the working parts making the shutter absolutely reliable.

An important advantage of the X. L. Sector Shutter lies in the fact that it opens and closes with the maximum velocity and will remain longer than any other shutter at its "full opening." The shutter can be fitted between lenses that have very little separation from each other. It can be operated for bulb, time and instantaneous exposures, the exposures ranging from one to one hundred and fiftieth of a second. Further particulars will be found in the new Goerz Catalogue

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DALLMEYER PORTRAIT LENSES. We are glad to print the following letter from J. H. Dallmeyer, Ltd., who are to be congratulated upon having secured such an enterprising firm as Taylor, Taylor and Hobson as their American agents.

LONDON, December, 1906.

It gives us pleasure to state that we have appointed Taylor, Taylor & Hobson, Ltd., of 1135 Broadway, New York, our sole American agents for Dallmeyer Portrait Lenses.

Owing to our close touch with the head offices of this firm in England, we are now in a position to avoid the delay which may sometimes have arisen in the past, over the purchase of Dallmeyer lenses in America.

Messrs. Taylor, Taylor & Hobson, Ltd., will carry a full line of our Portrait lenses at New York. Every facility will therefore be available for handling the business promptly and efficiently.

J. H. DALLMEYER, Ltd.,
C. F. LAN-DAVIS, Secretary.

THE HALOID COMPANY, of Rochester, are making in their Platina developing paper a product of unusual excellence. Using imported stock and pure chemicals under the supervision of Mr. Homer H. Reichenbach one of our best known chemists, it would be hard to imagine how better papers could be turned out.

DAYLIGHT DEVELOPMENT has come to stay. At one time the idea was that it appealed to the amateur only and not to be thought of by the man with a dark room. It has long since passed the theoretical stage and many professional studios have installed tank developers for daylight use.

Burke and James of Chicago are advertising a line of improved automatic developing tanks that is meeting with much favor. It is claimed that better negatives are obtained than by the old method and with much less labor. The method is endorsed by the highest authorities. A practical trial of its usefulness can be made for a very small outlay. A tank to develop twelve 8 x 10 plates costing only $2.00. Ask to see one at your dealers or write Burke and James direct.

NEW YORK PHOTO PAPERS is the name of the newest and one of the most complete lines of photographic papers made in this country. They are manufactured by the Mirmont Photo Paper Co., Glendale, Brooklyn, New York, who have just established an extensive and thoroughly well-equipped factory for the manufacture of gelatine print out paper; bromide paper, hard or soft; platinum, black and white and sepia for cold development and gaslight printing papers in all grades and surfaces. Dealer's discounts are offered to photographers in cities where the company is not represented. Further particulars will be found in our advertising pages.

THE AMERICAN ARISTOTYPE CO.'S family of eagles continues to grow in size and number. The nineteenth bird, just added to our back cover is bigger than ever. The steady growth of the popularity of the Aristo papers over a period of nineteen years is the best assurance that the company's motto "Permanency and Quality" has been consistently upheld. Their latest product "Aristo" Carbon Sepia has proved a great success and is a favorite already. If you have not tried it you should do so at once.

"LUXO makes shadows of all other flash powders" is a line from an advertisement, but it is substantially what we were told by an expert flashlight photographer when we asked him his experiences with various brands. We were glad to hear that this old favorite is maintaining its supremacy. W. P. Buchanan, Philadelphia, Pa., will be glad to give further particulars if you have any doubt about its qualities.

The Photographic Annuals are selling fast. If you have not secured your copy of the *American Annual, Photograms of* 1906, or *The British Journal Almanac* do it now before they are sold out.

EDITOR'S TABLE.

NEW CATALOGUE. From the Anthony & Scovill Co., we have received a copy of their new catalogue. It is a very handsome book and sets a high standard in catalogue making. In arrangement and printing it is an exceptionally good piece of work.

We believe that it is the only general photographic catalogue that has been published in this country in which all the illustrations are halftones made direct from photographs, and are therefore faithful photographic reproductions of the goods and do not as in the case of woodcuts, shown in other general catalogues, vary according to the ingenuity and imagination of the artist. Intending purchasers guided by these illustrations can make their selection from this catalogue with the same confidence in their judgment as if they had the goods before them.

The goods listed are almost exclusively manufactured by the Anthony & Scovill Co., and comprise very complete lines of cameras, accessories and supplies for all branches of photography.

The professional photographers will find much to interest him in this handsome catalogue. It also makes a very useful reference book to most things photographic and should be in the hands of every live photographer. A request to the Anthony & Scovill Co., Binghamton, N. Y., will bring you a copy postpaid.

BOOKS RECEIVED.—The *British Journal Almanac and Photographer's Daily Companion*, 1907 (GEORGE E. BROWN, Editor). 1624 pages, paper covers, 50 cents; cloth cover, 75 cents; postage, 25 cents. G. Gennert, New York, American sales agent.

The Almanac for 1907 breaks its own record for size and usefulness. Its pages, advertising and reading matter make up a grand total of 1624. Its outward form and bulk is a graphic illustration of the enormous growth of photography during the last fifty years. We have on our desk the first three years issues, 1863-4-5, bound up in one volume. The advertisements and reading matter for the three years bind up into a little volume that will easily slip into the vest pocket.

The latest volume contains no less than 1624 pages and covers the whole range of photographic activities in a very thorough manner. It may truthfully be said that it is a better book than ever and thanks to Editor George E. Brown the arrangement of the matter—reading and advertising—is a great improvement over previous issues. We could not begin to enumerate the thousand and one useful and interesting things to be found within its cover. Every photographer should possess a copy. As the American edition is limited it will be advisable to make early application for a copy to avoid disappointment.

CATALOGUE DE LUXE. The C. P. Goerz American Optical Co., New York, have just issued a sumptuous catalogue, the front cover of which is a reproduction in gold and two colors of Edward J. Steichen's design, awarded the first prize ($300) in the Goerz Catalogue Cover Design (1905). It is the most ambitious and successful cover we have yet seen and bespeaks most emphatically the possibilities of decorative and applied photography—a field much neglected by the photographer.

The contents of this catalogue are thoroughly in accord with the beauty of its front cover. The various Goerz lenses and other specialties are described at length. The type matter being set in rules with ornamented capitals, and tail pieces specially designed for this catalogue.

A special supplement of interesting pictures illustrating the many uses of various Goerz lenses, is inserted in the end of the book and adds greatly to its attractiveness. The catalogue has evidently been gotten up regardless of expense and is a splendid example of what the best printers and engravers can do. Our readers, who are interested in the lens question, can obtain a copy of this magnificent catalogue by sending nine cents to cover the postage, to the C. P. Goerz American Optical Co., 52 Union Square, New York

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IN our November issue we gave an account of the Studio of W. H. Wiseman, of Alton, Ill. Since then Mr. Wiseman arranged for an exhibition of oil and water colors by local artists; this was held in his new studio and attracted an unusual number of his fellow-citizens. This is a good and dignified method of advertising, and is well worth copying.

FROM the *Kalamazoo Telegram* (Mich.), we learn that H. Siewert, of that city, has just opened an attractive new studio. Built in the Mission style of architecture, handsomely equipped with every convenience Mr. Siewert has provided a studio which his patrons will enjoy visiting and recommending to their friends. We wish him much success.

Mr. Alfred H. Saunders, of New York, has accepted the position of editor of the *Views and Films Index*, a position for which he is qualified by an experience of twenty-two years as a photographer and slide maker. He was formerly editor of the *Optical Lantern Journal*, of London, England.

THE NEW COPYRIGHT BILL.

If you have not written to your Senator and Congressman as suggested on the first page of this issue, do so now before it is too late.

By J. H. Leonard, Racine, Wis.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV FEBRUARY, 1907 No. 602

THE NATIONAL ACADEMY OF PHOTOGRAPHY.

BY CHARLES WESLEY HEARN.

To the Members of the Photographers' Association of America:

AFTER close investigation of the report of the committee appointed at the Niagara Falls Convention to consider the suggestions offered in the President's address, relative to the establishment of a National Academy of Photography, and considering also the present status of that report, as placed by the vote of the convention, I beg leave to present to you the conclusions arrived at, and, as far as authority has been vested in me, the action taken in obedience to the unquestioned wish and intention of the convention:

1. I have recently found that there exists a little technical difficulty in the way that this resolution authorizing the establishment of the proposed Academy was disposed of by the convention. I do not deem it for the best interests of the art of photography from our professional point of view, and as loyal members of this Association, *to have even a suspicion of irregularity* attached to the expressed desire of the Photographers' Association of America becoming sponsors for the establishment of this Academy.

It is upon its success that all of our hopes and aspirations for the maintenance of the highest ideals in the art are centred. It will be our supreme court of appeal, the decisions of which it is expected will be widely and loyally upheld, carrying weight and authority because of the honor, ability, independence, and high mindedness of its members. I have therefore decided *not* to appoint that committee, as was expected of me by the Niagara Falls Convention, whose duty it would have been to create and launch the Academy, but will instead carry the matter to the Dayton Convention to have this parliamentary difficulty adjusted, and the wishes and intent of the 1906 Convention ratified and affirmed, and the method of this appointment and the personnel of the committee in consequence of this delay there determined.

2. By council with expert parliamentarians, I have been informed that precedents galore have been established where, under like conditions *of fact and*

intent, committees have been appointed, important works started upon, and even in many instances large sums of money have been expended or contracted for. This has been done both through an oversight *or of misinterpretation of power imparted*, where a subsequent ratification of the interpretation, and approval of the progress made, were necessarily advisable for legality.

My attention having been brought to this matter of irregularity, which had previously escaped me, I cannot either ignore it or proceed now to appoint a committee, even if instructed to hold over without decisive action until their appointment under the circumstances was approved.

Even if the right kind of a committee would serve under such conditions, to do so would savor too much of forcing the approval of the Dayton Convention, partaking also, in my opinion, of undue personality on my part, and especially injurious would it be, as it would present the Academy idea as being a matter that must needs be put through by hook or crook, when, on the contrary, its inauguration should be freely open to the fearless inspection and judgment of every photographer of standing in the land.

3. It is clearly, however, within my jurisdiction, and I consider it also my duty in furtherance of the spirit and intent of the Niagara Falls Convention, to appoint a general committee of a number of our representative men to meet as early as possible during the progress of the Dayton Convention; this committee to consider, on behalf of our *entire* membership, certain matters which it is advisable to have expression upon, as suggestions for the guidance of those who are to create the Academy. There are in addition certain other duties which we as an Association have to perform in relation thereto, such as—

(*a*) To appoint a sub-committee to take the preliminary steps necessary for its establishment;

(*b*) To consider the details of organization;

(*c*) The status of the Academy, whether it be strictly professional or not;

(*d*) The standard of membership;

(*e*) Its number, etc.,

and such other matters, amendatory or in addition thereto, as may appear to them meet and proper, without unduly embarrassing, nullifying, or rendering impossible the ultimate establishment of the Academy, which, to command the esteem and support of the profession, must also command the respect and approval of an educated public.

In the appointment of this committee I name no chairman or secretary, leaving the committee to organize at the time.

Such preliminary work, if any there may be to perform before the meeting at the Dayton Convention, I will personally look after.

The Executive Board for 1907 of the Photographers' Association of America consists of C. J. VanDeventer, President; C. L. Lewis, First Vice-President; A. T. Proctor, Second Vice-President; F. M. Medler, Secretary; F. R. Barrows, Treasurer. Also Ex-Presidents: W. H. Potter, C. M. Hayes, J. M. Appleton, J. S. Schneider, R. P. Bellsmith, G. H. Hastings, S. L. Stein, E. B. Core, J. Will Kellner, G. M. Edmondson, J. G. Nussbaumer, C. R. Reeves, G. G. Holloway; and Alfred Holden, W. S. Lively, E. Goldensky, Geo. E. Tingley, G. H. Van Norman, M. B. Parkinson, W. G. C. Kimball, J. Knaffl, S. H. Lifshey, Pirie MacDonald, J. C. Strauss, J. H. Garo, J. Edward Rösch, W. H. Hollinger, Dudley Hoyt, I. Benjaman, A. L. Bowersox, E. S. Curtis, H. D. Beach, D. D. Spellman, C. C. Pike, W. N. Brenner, J. E. Giffin, J. H. Kemp,

F. M. Somers, W. F. Van Loo, Geo. Sperry, Ryland Phillips, H. Schervee, G. G. Rockwood, J. Kennedy, Toronto, Ont., W. F. Core, E. E. Dietrich, W. H. Moses, W. L. Koehne, Chas. Stafford, Sr., B. Frank Moore, Charles Wallender, J. M. Bandtel and C. W. Hearn.

The above committee is largely composed of men who have been prominently connected with the Association and loyal supporters of everything looking to the best interests of it and the art of photography in general. The results attendant from such a gathering would be most helpful. Sincerely,

CHARLES WESLEY HEARN,
President P. A. of A. for 1906.

DECEMBER 29, 1906.

PAINTERS AND THE PUBLIC.

THE following interesting article from the New York *Evening Sun* of January 14, based upon some remarks made by Sadakichi Hartmann (Sidney Allan) should be read by all who are interested in the proposed Academy of Photographers. The word *artist* should be changed to *photographer* to make it thoroughly applicable.—ED. W. P. M.

Many opinions of a questionable, not to say very wild, sort are attributed to Mr. Sadakichi Hartmann, who is now engaged in enlightening the Middle West with his thoughts on Art; but among them there is one which, trite as it seems, is nevertheless profoundly true and hardly recognized, though formally acknowledged, by the generality of artists. It is namely this: That the present unsatisfactory relations between painters and the public are in great measure the fault of the painters themselves, their selfishness, their narrowness and their foolish little jealousies. "The artists," says Mr. Hartmann, "must stop this, and band themselves together; their spirit should be of fraternity and not of rivalry."

Now it is very easy to say they must stop this, and to talk about what their spirit ought to be, but you might as well lecture opera singers or actors or performing musicians, next to whom the common run of painters everywhere are perhaps the vainest, most childish and suspicious race of beings in the world. Nor are these qualities and defects peculiar to the bad sort who make up the majority in our great exhibiting societies. Some even of the others, outsiders, are notoriously subject to delusions of persecution and seem to be sincerely convinced that the body of professional painters are in conspiracy against genius generally and against them in particular, nor are they always capable of discriminating between their friends and their enemies.

The obvious truth is that in all large societies of artists mediocrity must infallibly prevail. For there are never very many excellent painters at any one time in any one place, and even supposing a society to be originally composed of the quintescence of talent, the greater it grows the lower will be the average of quality in its periodical exhibitions. As an example of thorough mediocrity the current exhibition of the National Academy is perhaps as satisfactory as any exhibition could well be. Yet in Mr. Kenyon Cox's opinion it is "the best exhibition held by the Academy in many years." Now, his opinion cannot be dismissed as absurd, for it must be admitted that Mr. Cox has far more candor and liberality than the ordinary Academician. His writings prove that he is not incapable of seeing beyond his own field as it is defined in his paintings, and when he discovers "life and vigor and freshness" in the dreary exhibition

of the Academy we must suppose that it represents his idea of life; and if this be granted, is it a matter of wonder that those whose idea is entirely different have been rejected?

There were some painters, good earnest men, too, who were deluded into the belief that the reunion of the Society and Academy was a step of high importance. They did not pretend that the exhibitions would be generally improved, but they had a vague notion that the larger the exhibition the better chance would the abler of the outsiders have of finding wall space. Of course, it does not follow at all. In a very large society the percentage of intelligence is apt to be low and the superior painter's opportunity is, therefore, lessened instead of being enlarged, while if he does happen to be accepted the chances are that he will be badly treated.

But, aside from large societies, which are invariably composed in the main of mediocre men, artists are not usually capable of "banding themselves together" as Mr. Hartmann suggests, nor are the best of them all free from that petty, ignoble spite and jealousy with which they usually charge the professional leaders. Moreover, while they rail against the societies it happens frequently that when one of them does chance to be elected he takes little or no pains to make his voice heard. Perhaps it is not desirable that he should. It is his business to paint and that occupation is sufficient to absorb the whole of a man's thought and energy, unless he be a very exceptional man. So it follows, moreover, that even the powerful artist is not always ready to recognize the merits of his contemporaries, being entirely occupied with his own particular vision. It is right that he should be. It is wrong, or at all events very unfortunate, that the organizers of our big annual exhibitions are unable to recognize his merits. But if we are to have a clear view of the present unfortunate relations between painters and the public we may as well recognize the fact that for one reason or another artists, good and bad, are not generally happy at "banding themselves together," which s unfortunate.

ARTISTIC LENSES.

BY WILLIAM GAMBLE,

Editor, "Penrose Pictorial Annual," 1907.

For years past opticians have been striving to eliminate the aberrations in lenses, and undoubtedly the numerous improvements introduced during recent years in the construction of photographic lenses offer valuable advantages to the scientific, archæological and technical photographer, through providing the means of obtaining perfect sharpness and mathematical exactitude. But it is quite otherwise for the artist, for whom these new qualities may be considered absolute defects, and opticians are now being encouraged to produce lenses which are not highly corrected, but which have in fact a certain amount of those very defects which they have hitherto striven to eliminate. By this means a desirable softness is obtained without flattening the picture.

The artist argues that what he really desires is rather to interpret nature than to slavishly imitate. He does not want to reproduce with absolute accuracy what is, but what *he sees*. M. Puyo, one of the foremost artistic French photographers, justly observes: "The lens which copies so perfectly a map or

design does not faithfully portray a tree or a face. The tree I have seen living and waving in the breeze is not that zinc-looking object: this army of leaves that insist on my regarding each separate one, is not so numerous as this—the lens must have added to them. In the same way it has given to this face wrinkles, freckles, and spots that my eyes never noticed, being otherwise attracted by the play of light and shadow on the contour and modelling. Because recording details too minutely and too exactly the lens does not make a likeness."

To counteract this undesirable property, various dodges and mechanical devices have been proposed and employed with more or less success according to the ability of the operator. The employment of common spectacle lenses, and the alteration of the separation of ordinary doublet lenses have been the most common optical methods of attaining this softening effect, whilst manipulative methods have consisted in setting the ground glass out of focus, or introducing diffusing media in printing. But such ways have done no more than to give an out-of-focus or unsharp image, which was always as flat as the paper printed on.

It has been left for some enterprising French opticians to depart entirely from their professional traditions, and produce lenses which, whilst suppressing excessive sharpness, still retain modelling and perspective.

Such a lens is the Eidoscope, brought out by M. Fleury-Hermagis, a well-known French manufacturing optician, and introduced into England by Mr. F. C. Clarkson, of Colchester. This lens has the characteristic feature of giving an image conforming to the aspect of the object. For example, it gives a portrait in which the eye cannot count the hairs or little lines any more than it could in the sitter; it tones down the hardness resulting from excessively sharp detail and renders retouching unnecessary—the result of which is often so deplorable.

Here is a point where the new lens will especially score. The amateur frequently produces photographs which are unsatisfactory to the sitters, chiefly for the reason that he cannot retouch, and the lighting of an ordinary room is almost always hard in its results. The new lens does its own retouching, and corrects the hardness of the lighting. Hence it would seem that the amateur has a better chance of making a pleasing portrait with this lens than any other. Whilst an ordinary out-of-focus profile is never otherwise than flat, that rendered by the Eidoscope is like a sculptured medallion. Unnecessary details, such as freckles, wrinkles, and little blemishes that are exaggerated by an ordinary portrait lens, are toned down by the Eidoscope. The result is a surprisingly lifelike picture, and retouching being rendered superfluous, especially when using an orthochromatic plate, the risk of losing the natural expression and "character" of the sitter is avoided.

In the hands of skilful professional and advanced amateur workers the Eidoscope lens is capable of yielding the most charming results. At a gathering of the Photo Club de Paris, Major Puyo exhibited to the members a beautiful series of portraits and studies executed with this new instrument, and many other workers have produced the most charmingly artistic results.

It is pointed out that the Eidoscope differs essentially from so-called "Anachromatic" lenses having the same object. The latter are corrected for spherical aberration whilst preserving a certain degree of chromatic aberration, necessitating some uncertainty, calculation or guidance in focussing, to obtain the exact amount of softness derived. The Eidoscope, on the contrary, is purposely uncorrected to any extent for

spherical aberration, but perfectly corrected for chromatic aberration (that is to say, exempt for chemical focus), which permits of obtaining without hesitation an accurate perception of the sharpness of the future negative by judging its image on the screen, which can be focussed to the precise point desired by the operator to suit the subject.

The "Eidoscope" has a working aperture of f/5, which allows instantaneous exposures in the studio. For pictorial studies the diaphragms f/5 to f/7 are to be recommended. With diaphragms f/10 to f/20 it gains considerably in sharpness, covering power and depth, and thus takes the place of the best rectilinear, and forming a superb landscape lens. It gives an almost stereoscopic relief to views taken with it. Let us add that a single component of the "Eidoscope" can be used, giving a focus double that of the complete lens, and thus enabling the operator to take advantage of a long focus when necessary. There is neither distortion nor astigmatism even at full aperture.

THE MERITS OF SEPARATE TONING AND FIXING.

BY A. J. JARMAN.

THE treatment of a silver print after it has been washed so as to free it from nearly the whole of the free nitrate of silver has often been, and still is, a subject of controversey. As to the best method of toning, as it is termed, which simply means the change of color from the red or purple red of a direct-made print to a color more agreeable, and in keeping with the taste of those who produce them. To M. Lizeau, a Frenchman, belongs the honor of introducing the toning of photographic pictures, being used for the first time upon the Daguerreotype, and known as the gilding process. This selfsame process being afterward applied to the toning of photographic prints made upon *plain* salted paper, previous to the introduction of albumenized paper.

The first gold toning solutions were in reality combined toning and fixing preparations. That used for the Daguerreotype being a weak solution of hyposulphite of gold, while the toning bath that was universally used when the use of plain paper and albumenized paper became the practice was one of an exceptional composition. Although this solution will tone and fix a plain silver print, and give a beautiful blue-black tone, the whites of the picture soon suffer and an unusual bronzed tint of sulphurization sets in and produces a yellowness all over the print. It may interest many readers to know the exact composition of the earliest toning bath that was used for commercial purposes. Here it is:

Chloride of gold	1 grain.
Distilled water	1 ounce.
Hyposulphite of soda	1 ounce.
Distilled water	2 ounces.
Nitrate of silver	4 grains.

This mixture had to stand for twenty-four hours before it could be used for toning; what purpose the introduction of nitrate of silver served is not at all clear.

It was soon discovered that the above toning solution was defective, and that the prints so toned could not be relied upon to be permanent. Then came the toning method that lasted in use for many years, and is still used by many photographers, by toning the print in a gold solution, restrained by the introduction of acetate of soda and bicar-

bonate of soda, making up the toning solution in a very weak condition, and allowing the gold to replace the organic compound of silver, and so produce an image that contained none of the sulphurized silver compounds, that were produced by the original toner, the fixing of the print being carried out *after* the toning operation.

This method of toning was first introduced in the early sixties and has continued ever since with the majority of photographers. The other toner, known as the borax toning bath. was first introduced by the late Mr. Werge, of Berners Street, London. This bath also is an excellent toner. The solution can be used for toning the moment it is mixed. While the introduction of a solution of carbonate of soda or bicarbonate is used by many, the fact is that a gold toning bath *must* be of a slightly alkaline nature to enable the gold to replace the silver, otherwise the operation is not one of toning but one of bleaching, the prints becoming very thin and poor in color, instead of rich and bold. Toning a silver print with platinum salts in place of gold, must be of an *acid* nature, or the toning operation does not take place. This proves that there is a great difference in the character of these precious metals. Any tendency to neutrality or alkalinity of a platinum toning bath will produce a similar effect upon a silver print as a solution of gold in an *acid* condition, the print being thin, poor, and weak.

One of the modern combined toning and fixing solutions is given here. This bath has been used by the amateur and professional alike, and for what purpose? just to save a little time, and only a little time. The permanent character of the prints invariably suffer; after toning, the prints fade in the course of a few months, and sometimes in a few weeks. The following formula gives the component parts of a combined toning and fixing bath that has been made up and sold for the purpose of toning and fixing. Where permanency is of no consequence it answers the purpose.

Water (temperature, 180 to 200 F)	1 gallon.
Hyposulphite of soda	2 pounds.
Acetate of lead	¾ ounce.
Alum (white)	¾ ounce.
Citric acid	¾ ounce.
Sulphocyanide of ammonium	2 ounces.
Chloride of gold	15 grains.

The gold chloride in solution is added last, the mixture must be allowed to stand for twenty-four hours; siphon off the clear liquid, it is then ready for use. Prints toned in this mixture, no matter whether they are washed previously or not, present a very good color, but they are never so brilliant as prints toned in a separate toning bath. All that the combined bath saves is the washing of the prints previous to toning and the time consumed in separate fixing. The use of the combined toning and fixing bath many times over gives no advantage over the separate plan, because the gold solution in the latter case can also be used many times over with advantage. The two following toning formulæ will give the richest tones upon any kind of silver prints, that it is possible to obtain:

1. Water	40 ounces.
Sodium bicarbonate	40 grains.
Sodium acetate	60 grains.
Chloride of gold	3 grains.

This toning solution works best after being mixed six to twelve hours. It gives beautiful rich tones, any color from sepia to blue-black.

2. Chloride of gold	3 grains.
Water	40 ounces.
Saturated solution of borax	2 ounces.

This bath can be used as soon as mixed, the prints are washed well in five or six changes of water previous to toning. After toning they are washed again in three changes of water, then fixed for ten minutes in a solution of hyposulphite of soda, indicating *eighteen*

on the hydrometer. After fixing, the prints must be well washed by changing them from tray to tray in fresh water, or allowed to rinse for half an hour in running water to complete the operation; when the prints will be ready for drying and trimming, or mounting while wet. The operation of separate toning and fixing may appear to some a somewhat long operation, but it is not so. The handling of the prints takes but a short time. But there is one great point to be considered, and that is, when the toning has been carried out separately, and the after-fixing adopted, the lasting of the print against fading can be depended upon. The writer has prints in his possession to-day that were made thirty-three years ago, toned in the acetate gold toning bath, that are in quite as good condition as the day they were made, showing no signs of fading at all. The paper used was albumen paper, sensitized upon a fifty grain bath of nitrate of silver; the prints being mounted with a preservative paste.

When prints made upon the modern gelatine printing-out paper are toned in a combined bath, there is another action apparently set up besides fading. Often there is a wavy and irregular color distributed all over the surface; while some parts of the picture may be good in color, there are many patches of a greenish-yellow color that mar the whole effect of the picture. When it is taken into account that large numbers of prints made from beautiful negatives are mounted upon good and expensive mounts, that the whole becomes wasted through the use of a toning solution that has given no other advantage whatever but the saving of a little time, it should be convincing to everyone who has practised this kind of toning to abandon it, and devote the extra time and energy to the more certain and wise method of separate toning and fixing.

The only compound toning bath that has been known to be reliable, is the one for the toning and fixing at the same time prints made upon porcelain or opal glass, this being intended to give sepia and brown tones only, of a very even quality throughout. For paper prints it does not appear to be suitable, the color in this case not being of such a pleasing character. Warm water should be employed in the making of this toner, when as soon as cold it is ready for use.

Water	48 ounces.
Phosphate of soda	120 grains.
Sulphocyanide of ammonia	200 grains.
Hyposulphite of soda	4½ ounces.

Allow the above to become completely dissolved then add—

Chloride of gold	8 grains.
Water	8 ounces.

The use of this bath for porcelains leaves nothing to be desired for sepia and brown; the printed plate is washed well before being placed into this bath, then toned for a period of five to ten minutes. After washing two or three times the plate is placed into a ten per cent. alum solution for four or five minutes, then well washed and dried.

An exceptional use for the combined toning solution first given is the re-toning of paper prints. If a print has been toned by the separate toning and fixing plan, such prints can be retoned to such a color that is not attainable by any other process. All that is necessary is to place the print, after it has been toned, fixed, and dried, directly into the combined toning and fixing solution. In a very short time the print will assume a color of a very rich purple-black tint. The print must then be placed into clear water and well washed under the faucet and dried. The colors that are to be obtained by this means are of such a variety that cannot be obtained by any known previous toning. It has been supposed by very many photographers

that a print after being toned and fixed in the usual way cannot be toned again. It can be retoned, and with the combined toning and fixing bath it is easily accomplished. Retoning can also be carried out with the usual toning solutions, but the quantity of gold must be increased, and also the alkalinity by the addition of more borax solution or carbonate of soda.

The bleaching of overprinted prints can be easily accomplished with the separate toning solution, by flooding the surface of the print during toning with a small quantity of the chloride of gold solution (one grain to the ounce of water), allowing the gold solution to enter the toning bath. This dodge is often practised by those who thoroughly understand the handling of gold toning solutions. These hints may prove to be new to many of those who read them, and also a source of profit by introducing new colors to their prints.

In the use of the combined toning bath the change of color may be due to the transformation of a part of the silver image into silver sulphide, but when the stronger gold solution is employed as in the separate toning method, such action as the above does not take place, there simply appears to be a further deposit of gold, and as all the unacted-upon silver salts have been dissolved out of the paper by the hyposulphite of soda fixing bath, there will be nothing gained by refixing; all that is necessary after retoning in either case is to wash the prints well, dry, and mount as usual.

PRACTICAL HINTS ON RETOUCHING.

It may be explained that I have never had any lessons in retouching and that what I know has been gained partly from reading but chiefly from the best of all teachers, Messrs. Failure and Experience.

Pencils.—These are of two kinds: (1) Hexagonal cedar wood, (2) loose leads in an adjustable holder. The latter are far more convenient and economical. One holder will suffice (cost 25 cents). The loose leads are made in six degrees of hardness (cost 25 cents per box of six leads). The most useful numbers are 2 "soft," 4 "hard," and 6 "very hard." Insert a lead, leaving just about one inch projecting from the holder end and screw up the end moderately tight. Do not use a knife for sharpening. Glue a bit of moderately rough glasspaper to a bit of stout card or straw board and a piece of the finest glasspaper to the other side. Shape the end of the lead with the rough sandpaper and finish off with the fine paper. Do not rub the lead to and fro but use a rolling and rotating motion. Rubbing the lead tends to break away the fine point.

Medium.—Ease of working partly depends on having the medium not too thick or it is sticky; not too thin or it does not give enough tooth. Medium made with turpentine gets thicker with age, also every time the cork is taken out of the bottle some of the turpentine evaporates. Hence a few drops of fresh turpentine should be added to the stock bottle every now and again.

The medium should not be thin enough to run off the glass rod, but to come off in drops, about one every five or six seconds when the rod is withdrawn and held vertical. The medium should be about as thick as thin dairy cream but not thicker.

The Glass Rod.—Procure a short piece of glass rod, say four inches long and about as large as the letter O in the word Retouching at the top of this article. Hold an end of the rod in the gas flame until the glass softens and

rounds itself neatly. Let this cool gradually and round off the other end. With a red-hot knitting needle bore a hole in the cork of the retouching bottle just large enough to permit the glass rod to pass through and yet be held tightly. With this rod we can transfer one small drop of the medium to any part of the negative. The rod is so adjusted in position that its end always dips about half an inch into the medium in the bottle.

The Touch.—Do not confine yourself to any touch, but learn to use them all, viz., the dot given with the pencil held vertical to the negative, the straight and curved comma, the wavy line, the spiral, *i.e.* commencing with a dot or point and then carrying the pencil point round and round this dot in a slowly increasing circle or spiral. (This touch is very useful for filling up freckles, air-bell marks or small froth marks due to faulty developments.) The worker must also learn to move his pencil point along a straight or nearly straight line, as this touch is very useful in dealing with grass, leaves, facial wrinkles, junction lines in masonry, etc.

The Desk.—The negative must be firmly supported, *i.e.*, so that it does not rock or tremble when touched. It does not in the least matter what sort of a retouching desk is used provided it is steady, holds the negative at a convenient slope or angle, and gives a good light. In some forms of desk the negative is made to rest on a piece of clear glass. This is a mistake, for it endangers the negative slipping about. Spots on the supporting glass may be mistaken for spots on the negative. The best slope or angle can only be found by experience. About 45 degrees is recommended. The height of desk and slope of negative and its distance from the eyes should be adjusted so that the worker's body is as near upright as possible. A sloping position is bad for body, brain and eyes. Keep the eyes as far away as possible from the negative, provided that vision is sharp and no strain on the sight is felt.

The Reflector.—A looking glass or mirror is the worst of all. The best is a sheet of opal or milk-white glass with one surface ground mat. This is used by those who work the carbon process, and the photographic dealers stock "ground opal" in the usual sizes. A piece ten inches by eight inches is convenient and only costs about 10 cents. When it gets dirty wash it with soap and water and a nail brush. Next to opal is quite clean white blotting paper. Next to that white cardboard.

The Mask.—This is simply a piece of black paper about eight inches square. About the centre an oval hole cut out measuring say one inch by three inches. A second mask with a smaller opening, say two inches by one and one-half inches, is also convenient. The mask is laid on the negative and serves a threefold purpose. It concentrates attention on the part to be worked on. It protects the eyes from needless light. It prevents the hand soiling the negative.

Some Beginners' Mistakes.—(1) Do not try to fill up large clear glass spots by retouching. It can be done easier and better by the brush and color. (2) Having applied a drop of medium to the part requiring attention, then *lightly* spread it till it occupies a space about as large as a penny, using for this purpose a bit of fluffless rag. Then let it alone for about ten minutes so that some of the solvent can evaporate. Then take another bit of rag and rub lightly with a circular or spiral movement until *nearly* all the medium is removed. The beginner puts on a drop of medium and at once rubs it all off again and so finds it difficult to get a "tooth" to take the lead. It is also a mistake to use the finger for applying or rubbing the medium as is sometimes recommended.

(3) Do *not* commence your retouching experiments with a portrait but use any ordinary landscape negative, and make up your mind to sacrifice this negative in order to practice, and to see what you can and cannot do. (4) Always take a trial print before beginning work, examine this and mark the parts requiring attention with circles round them. Keep this print until a second one has been made after retouching and compare the two point by point. (5) When applying color have the brush too dry rather than too wet. The right degree can only be learnt by practice. Most beginners fail by reason of using the color far too wet and watery.

The Brush.—Make this experiment. On the waster negative make two large pinhole spots by scratching away the film from two circular patches about as large as the letter O. With a small fine pointed camel's-hair brush as used for water color painting apply a blob or drop of rather thick color mixture; any color will do for the experiment. Let this dry, and behold all your color has forsaken the centre of the spot and formed a dark ring along the film edge. Now repeat with the second clear spot, but this time mixing the same color with a drop of office gum which should be about as thick as maple syrup. When this is dry the color will be fairly even all over the hole. Moral, use gum water.

The Gum Water.—Take a teaspoonful of gum arabic, wrap it quite loosely in three or four thicknesses of brown paper and crush it under the boot-heel. Put about a tablespoonful of hot water in a cup and add the gum powder. Keep in a warm place and stir until dissolved. Then add *one drop* (not more) of carbolic acid, stir well and allow to settle. Pour off the clear part into a small bottle. Fit a glass rod to the cork in the way already described; use a wide-mouth bottle, a rather loose fitting cork. Clean the bottle neck and be very careful not to touch the bottle neck or rim of cork with gum or they will stick and you will get broken bits of cork in the gum bottle.

Colors.—This is largely a matter of fancy. Personally I recommend a mixture of lampblack and yellow ochre for pyro developed negatives. The "half pans" of moist water by such firms as Reeves, Rowney, Winsor and Newton are quite cheap (price 10 cents) and last a very long time. For small pinholes in the sky I advise a half pan of vermilion. This is very opaque and a very tiny touch stops all the light.

Brushes.—One or two are needed. Those mounted in a tin ferrule are the best. The point when wet should be fine, springy and not too long. When buying test the point by drawing the brush through the lips.

Color and Density.—Do not forget that our aim should be to fill up any holes with pigment which is of the same color *and also* the same density as the surrounding parts. For this reason opaque are better than transparent colors. But the test of the work is the print it gives. The best eye may be deceived. Therefore reserve judgment until the print is made.

Cleaning Off.—Should the work for any reason prove unsatisfactory, it can be easily removed by rubbing gently with a bit of clean rag and a couple of drops of wood alcohol. The beginner is strongly advised not to be satisfied with his work if he feels that the result is not satisfactory. Therefore, let him clean off and begin again.

Piling on the Lead.—It may sometimes happen that we want to get on all the lead we possibly can. For instance, a nearly clear air-bubble mark in the dense part of a sky. Apply medium as usual. Then go all over with the dot and vertical pencil; this adds a kind of extra tooth which takes lead from the spiral touch. Now gently

breathe on the part when it will then be found that we can get on more lead again. Cover the dot with a bit of tissue paper, rub with the finger nail and then begin again with the dot.

Artificial Light.—The fact that one can use a constant artificial light makes many prefer this to every varying daylight. The reader is advised to accustom himself to both. The point about any light is that it should evenly illuminate the reflector. White cardboard makes a good reflector to put round the lamp to throw its light on to the reflector. Do not attempt to use the lamplight direct, even with a ground glass diffuser. Always look through your negative downward at a white reflector.

Reducing.—I have said nothing about the knife for scraping or cutting away over-dense lights, because the beginner is strongly advised not to attempt anything of this kind until he is fairly expert at pencil and brush work.

Final Hint.—Under rather than over do the work. The best worker is he who produces his desired effects with the least alteration of the original.—*Practical and Pictorial Photographer.*

PHOTOGRAPHY AND THE STAGE.

BY JAMES E. GOOLD, F.R.P.S.

By using one of the new fast lenses and a plate bathed in Orthocrom T or other similar dye, it is now possible to take photographs with the hand camera (and quick exposures) in the theatre with ordinary stage lighting without in any way disturbing the audience, or the players, which was not possible before.

I have worked with a Zeiss Tessar lens at *f*/6 and have given one-fifth to one-half second exposure from the front of the first balcony or from one of the boxes, and have obtained some very fair results, in some cases with only the battens and floats of incandescent lamps and at other times with plain arcs in addition. Of course it is ever so much better if the particular scene you wish to photograph will admit of this extra lighting, but there are many scenes where it is not possible, and then one begins to find out some of the difficulties. In most cases, however, they can be overcome with a little judgment and patience.

Photograph No. 1 is one of the first attempts, and was taken from the dress circle box. It is the Throne scene in "The Rose of Persia," and was only lighted with incandescent lamps and no arcs. In a scene of this kind one must be all alert and watch for the moment when the principals are in the best positions and most likely to pause for a second or so, and then make the exposure, giving the longest you dare without getting movement. You will often find it possible to give a second or even two, and then you feel delighted at having the patience to wait for this opportunity. This photograph had a full second's exposure and very little movement is to be seen.

Photograph No. 2 is of "San Toy," and shows how large numbers on a stage may be successfully dealt with when both arcs and incandescent lamps are used, as a short exposure may be given. This photograph had about 1-5 of a second.

The method adopted in taking these pictures is very simple; the great points to observe are care and cleanliness. As the plates are extremely sensitive to red and yellow light, it is necessary to work in the farthest corner of your dark-room away from the light, or without any. I

prefer to work without a light, and to do this you must carefully arrange everything beforehand, so that you can find dye, dishes, plates, dusting brush, drying cupboard, measures, etc. etc., as you require them.

On the left-hand side of my sink is a table, and on this the plates, brush, and drying cupboard are placed. Over the sink I put a board, and on this is the porcelain dish containing the dye. In the sink is a much larger porcelain dish with the lip placed so that a gentle stream of water from the tap just catches it and runs into the dish which is slightly tilted, and so a constant flow of water is ensured. This is for washing the plates after bathing. Now, when all is ready, screen your lamp and mix up your dye, which is very expensive, and care should be taken not to mix more than you consider will well cover your plates, as I have found it is not wise to try and use this over and over again.

The dye may be bought in bottles of 1 gramme, ½ gramme or in 4 or 8 ounce solutions diluted in alcohol, and full instructions for use are given by the makers in each package. (The dye in either form may be obtained from The United Printing Machinery Co., New York, Boston, and Chicago.)

The dye, after mixing, should be filtered and put into a porcelain dish, and when the plate has been dusted the dish tilted so that the dye is at one end, the edge of the plate placed in the dish and the dish slowly lowered and so get a gentle and even flow all over the plate; it should remain for three minutes; occasionally give it a rock to and fro.

The great thing to avoid is air bubbles forming on the face of the plate; at the end of three minutes take the plate out and place it in the dish of water giving a rinse and then allowing it to remain in the running water for three minutes, after which it must be lifted out and placed in the drying cupboard, which should be heated so that the plate may be dried as quickly as possible. I always prepare my plates the day they are required and can get them dried in two hours. The plates must be dried and put into the slides in darkness, as they are now very sensitive to red and yellow light. Now away to make the exposure.

Next comes the test of patience, as on your return home you will be most anxious just to develop one to see what you have got. If it is cold weather it is wise to have your room warm, dishes warmed, and developer warmed, as in nearly every case you will find your plates are under-exposed and require some pulling out. Any of the clean developers will answer, but I think I prefer the pyro-soda, as it gives more detail and not such a harsh negative as some. Do not attempt to develop close to the light, as there is little fear of the image flashing up. Put your plate in the dish, flow the developer over; put a cover on the top and content yourself with rocking the dish for three or four minutes before attempting to look at it, and then only for as short a time as you can—just long enough to see if the image is appearing and to judge from the appearance how much longer you think it may take before having another peep at it. Then have a look at it and judge for density. After the first few, if you have been careful to note the lighting on the stage and exposure you gave, you will soon be able to judge about the density you will get in ten to twelve minutes developing.

Just a word about the plates to use. Any plate which will work in the ordinary way clear from fog will answer. For my work I have always used Seed plates, and have found them to answer well. Some of the negatives which I have taken on four by five plates have been sharp enough and with sufficient detail in them to bear enlarging up to twelve by fifteen.—*Penrose Pictorial Annual*, 1907.

EDUCATIONAL CONVENTIONS.

BY W. S. LIVELY,
President of the Southern School of Photography.

THere has been a growing demand among all State associations, as well as the National, for more dissemination of practical knowledge among the members at the annual meetings, as well as exchange of ideas relative to improved methods of conducting the business of photography, in order that the character and standard of work be raised and our profession become more remunerative to us than it has been in the past.

The National Convention held in Niagara was a decided success from every standpoint, and especially so in the exchange of ideas, offering valuable suggestions, relating experiences, all of which were helpful to us in the way of financial improvement of our business management and the more modern way of conducting it successfully in accord with the present times.

Those who attended this meeting, or who have carefully read the complete report of it published in several of the leading journals, and will put into practice the many valuable suggestions, are bound to be benefited thereby.

On account of the large body of photographers attending the national meetings the educational features are necessarily confined to the business, theoretical, and artistic side of our profession.

The harmony, good will and unselfishness displayed in the rendering assistance by the more fortunate to those who were in need of help, was a strong indication that we were being elevated as a profession upon a higher plane, and that we are now nearer to the recongition that we are entitled to than ever before.

Another gratifying condition shown in the Convention was the intense interest manifested, which is no doubt another evidence of our waking up, and for which we owe much to the untiring efforts of the officers in the encouragement to bring every one present into the discussions.

Contrasting this meeting, where the interchange of business methods, continuous and intense interest, together with the lack of dissipation, with meetings held in former years, where all was frolic, fun and dissipation, and I am sure the Niagara meeting has the approbation and appreciation of all intelligent and thinking photographers, and will be remembered with much pleasure and pride that few will regret having spent the money and time in attending it.

Our State Conventions, not being so largely attended as the National, are ideal places for the imparting of practical knowledge, in handling light and subject under the skylight, development and treatment of negatives in the darkroom, and retouching, etching, etc., in that department.

There is no doubt about the advantages to be derived from a system of practical class instruction, and, in addition to the educational advantages to the individual photographers, the increased attendance that such a convention will draw will be very much in evidence, as the Associations of Indiana, Virginia, North and South Carolina will testify to, and this increased attendance will justify all expense and trouble incurred.

The wide-awake and progressive membership of the Indiana Association, as usual, are foremost in every movement toward the elevation and improvement of our profession, and is responsible for and should have the credit of introducing a thoroughly practical system of class instruction. The Indiana Association

has held two annual conventions. The Virginia and Carolina Association also introduced the same features at the Asheville Convention—all of which prove to be very satisfactory to the officers and the entire membership.

Instead of giving a review of the class work of the Asheville Convention, held in October of last year, as promised, I will give a brief and condensed outline of the plan, which will no doubt be interesting and perhaps be of benefit to other State Associations who wish to try it.

The first thing to be considered by the officers of an association preparatory to holding a convention introducing practical work, is the location of the meeting-place and display room in close proximity to the skylight and dark-rooms. This is necessary, in order to do justice to the manufacturers and dealers who are supporting the convention. If the skylight and dark-room can be located in the same building, all the better.

A camera supplied with as many as twenty 5 x 7 holders, ten 5 x 7 hard-rubber trays, and ten four-ounce graduates, together with chemicals, complete the outfit.

After the formal opening of the convention the entire membership attending are enrolled and numbered in regular order. They are then divided up into classes of ten, named alphabetically, and over each is placed an instructor and demonstrator. This complete list, upon which appears the time set apart for each class under the skylight, in the dark-room, and then in the retouching department, is posted in a conspicuous place so that all may know the time for their class.

In order that all may receive the experience and instruction of the different operators, and that the demonstrators may have the opportunity of coming in touch in a personal way with all who are in attendance, the instructors and demonstrators are changed each day to different classes.

The duty of the instructor, with the assistance of the demonstrator, is to pose and light the subject, focus and balance the image upon the ground glass, when, after a short explanation to the class from the instructor relative to the lighting, position, etc., number one enrollment comes forward and makes the exposure, giving time as directed by the instructor and demonstrator.

Two or three plates are made of same position, after which a change of pose and light with an additional two or three exposures, and so on until the class of ten have made plates. It has been found that thirty minutes will give ample time under the skylight for the class of ten to make their plates, and that the instructor can have from five to ten minutes in giving valuable hints relative to his methods of lighting, posing of subject, etc.

Class A, having concluded under the skylight, are conducted to the dark-room, and class B, with another instructor and another demonstrator, admitted under the skylight.

The demonstrator for class A, upon entering the dark-room with instructor, will proceed to make up a sufficient quantity of developer for the ten plates. The class will each be provided with graduate, tray, and sufficient developer for a plate. Under the direction of the demonstrator, assisted by the instructor, they will then proceed with the development.

While plates are in fixing, the demonstrator has the time and opportunity of talking to the class relative to his plates, which becomes more personal and thereby more impressive and more beneficial than to a greater number. After the plates become fixed, another opportunity presents itself for the instructor and demonstrator to impart valuable information in the way of criticism of deficiencies in lighting, posing or chemistry, besides calling attention to the good

qualities that appear in the successful plates.

This work can be also accomplished in thirty minutes; but, if more time is required by either the demonstrator or instructor, an extra fixing bath can be used, and the plates carried outside the developing room, in order not to conflict or be in the way of the class following. After the instruction is completed relative to the development, etc., the class is next conducted to the retouching department where they can remain the same period of time.

The advantages to be derived from a system of class instruction, over a few demonstrations by expert men, are many. Every one must admit that when each individual is required to do a thing him or herself, under instruction, that the knowledge is much easier imparted and retained.

The limited number admitted under the skylight, in the dark-room and in the retouching room, prevents confusion both to the class and the instructor, and makes the instruction given more personal in character and of course more beneficial.

The fact that the demonstrator and the instructor are responsible for any failure that might occur in the various manipulations, from the beginning to the conclusion, relieves members of the class of all embarrassment that might exist.

For the consolation of the instructor and demonstrator who, so unselfishly and with so much hard work, accepts and performs the duties in a system of class-work at a convention, I will say, that you are not expected to secure ideal results nor make negatives that prizes would be awarded upon; hence do not hope to do so, for you will be very much disappointed. You will, however, have laid the foundation for a wonderful improvement in the ability of those who are under your instruction, and they will appreciate your help and let you know that they do during the time of this work.

Then, again, this system of class instruction does not in the least bring about any competition between the photographers who have charge of the classes as instructors, the demonstrators who assist with instruction, nor the various plates that are being used for this method of education.

It is an admitted fact by all manufacturers of plates, paper, etc., that the more education along photographic lines that we as professional photographers have, the more plates, paper, etc., will be used to supply the increased demand for photographic art that a high class of product will bring.

This being true, all manufacturers of plates, paper, etc., are interested in photographers having greater ability, and will, of course, share in the sale of increased amount of supplies that will be in demand. Neither will this class system conflict with demonstrations of the Aristo lamp, the lectures on Aristo-Platino paper by Mr. Hazlett, or the demonstrations of any other light or paper, all of which is valuable knowledge and much to be desired.

There being only thirty engaged in the class work at a time, leaves the majority of the membership with the manufacturers and dealers or the demonstrations of other kind that are being made by expert demonstrators. The class work is suspended during the time set apart for special demonstrations of paper, like that of the Aristo Company.

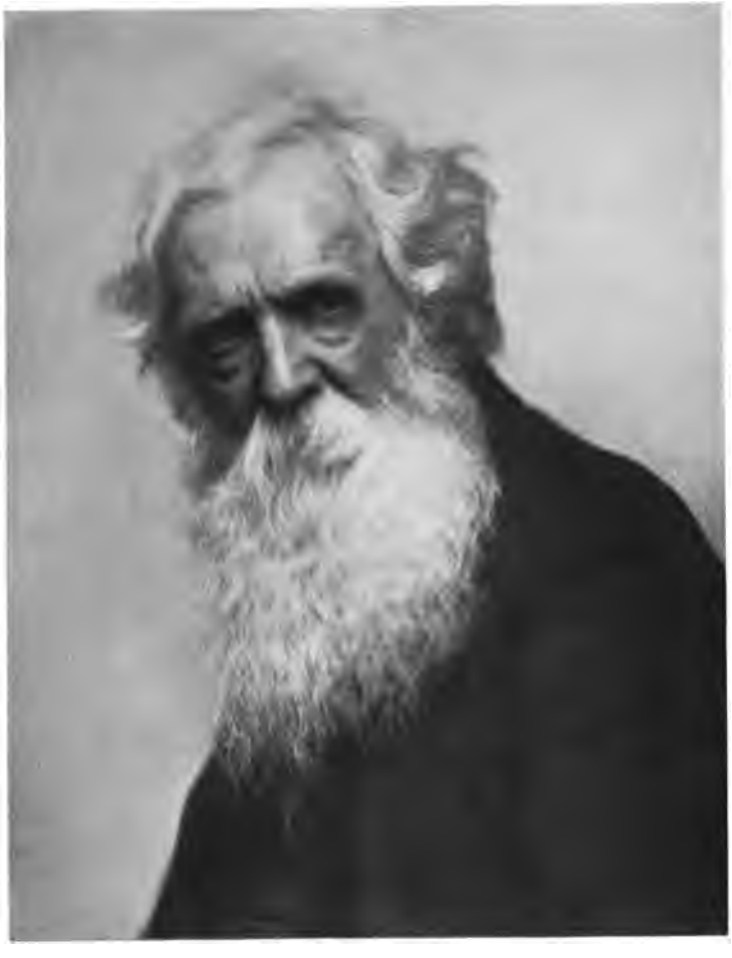
Should there be any further information desired relative to this subject not contained in this article, it will be a pleasure for me to answer any communications that I may receive.

Dead Black Varnish.—Benzole, 1000 parts; indiarubber in shreds, 6 parts; asphaltum, 300 parts; lampblack, as required.

From Penrose Pictorial Annual '06-7

Illustrating article on "Photography and the Stage"

By J. H. Leonard, Racine, Wis.



By J. H. Leonard, Racine, Wis.

By J. H. Leonard, Racine, Wis.

By John A. Schreurs, Chicago, Ill.

By Solomon Henricks, Murphysboro, Ill.

By J. B. Dixon, Dalhart, Texas

From Photographische Rundschau

OUTDOOR STUDY

By R. Baumann, Vienna

MILTON WAIDE—ONE MAN METHOD OF PHOTOGRAPHY.

BY SIDNEY ALLAN.

A GOOD teacher, no matter in what branch of learning or handicraft, is rarely met with. By a good teacher I do not merely mean a person who has the necessary knowledge and experience, and a method to convey this knowledge and experience in a clear and concise manner, but rather a person who possesses an inborn faculty for teaching, the necessary amount of patience, sympathy, and enthusiasm which alone can make any teaching valuable. Only teaching imbued with such qualities can yield practical results and will never become stereotype and mechanical, the great danger to which all teaching is exposed.

I believe Milton Waide is such a teacher. He is truly enthusiastic about his work. He takes a personal interest in all his pupils and has that rare patience of repeating the same lesson over and over again until it is finally understood.

It has been his ambition for years to open a school of photography, but he only realized it last year, after being twenty-four years in the profession. He began his career in Quincy, Ill., where he had a studio for several years; then he became operator at Fredericks', New York, and later on drifted back to the West. Nine years ago he returned to New York, and about four years later started to teach his "One Man Method" to which he has remained loyal ever since.

Portrait photography seems to be a profession where success is hardly possible without some sort of preparatory study. Of course this may be acquired by self-study or apprenticeship, but this sort of schooling is necessarily one-sided and incomplete, and, I fear, it would take years to give the same amount of proficiency that could be taught by a regular method in a comparatively short time. It is to Milton Waide's credit that he has realized the opportunity of such a school in New York City and that he has succeeded in establishing it.

It should prove a successful venture. Of course, it is at present merely a modest beginning of the big institution that Milton Waide hopes to make it some day. But even as it is today, it is well equipped. The shades in the studio are arranged in such a manner that operation under the skylight can as easily be taught as home portraiture. Nor is artificial light illumination lacking. The big camera is provided with the latest and most improved devices. The dark room is a marvel in the ingenious manner in which every inch of space has been utilized and the facilities which are thereby afforded, and all the other arrangements for retouching, printing, mounting, making folders, etc., reveal the same practical advantages. Everything to the smallest detail shows that it has been carefully thought out by a man who knows the value of simplification; of saving time and labor.

The main object of the school is to help amateurs as well as professionals "to become proficient in any of the known processes, new ideas, up-to-date effects, modern and improved apparatus, accessories, or products," or in other words to make his pupils experts, independent of accident and expensive experiments, able to do meritorious work if they wish to follow photography as a pastime or efficient to open a photographic studio and to run it successfully without assistance, if they wish to take up portraiture as a profession.

Milton Waide always puts special stress upon the latter. It is his hobby, his ideal, in which he has boundless faith. He believes that every person of ability can become an expert in operating, developing, retouching, and printing, *i. e.*, do all the work in a photographic gallery. It is his idea of "Different Photography," the "one man work throughout" method. During his studio activity he carried out this idea. He received patrons, posed, developed, retouched, printed, made his mounting, and executed his wish throughout in his "one man" conception of the sitter. He also taught this system for five years by a series of personal letters, accompanied by an exchange of pictures and criticism of his pupil's work.

Of course we know that all larger establishments are run on a more commercial basis; on the plan of divided and specialized labor. The subject is passed from the reception room lady to the operator, then to the developing man, then to the retoucher and the printer, none of whom have seen the person, and finally to the mounter and back to the reception room lady.

Of course this method can easily be found fault with, as such a conglomeration of ideas and handiwork of various employees is hardly conducive to individuality of expression.

Let us see what Milton Waide has to say about it in his little descriptive booklet. He quotes a paragraph written by the late Edw. W. Newcomb.

"The operator gets a pose and makes the exposure. Then Mr. Developing Man takes a crack at the plate according to his idea of what it should be. Then the retoucher 'stipples' it over to improve the face he has never seen, usually ruining the natural modeling in his endeavor to flatter (which should have been accomplished by the position, lighting and general result obtained by the operator). Then the printer has his think and tries to improve it, while the mounter finishes it up. What have you got? The result is not any one man's work at all, and no one man has the right to claim that he made that picture by putting his name thereon as the maker."

The criticism is a severe one, and at the first glance it looks as if it were absolutely justified. But how is it that the work of our metropolitan establishments, which all apply the conglomeration method, is so infinitely superior—not only in finish but also in the expression of character—to any of the "one man" performers? I do not believe that the characteristic rendering of likeness has much to do with the dark-room or printing-room. That is decided in the studio. Of course you may want the print a little bit lighter or darker in tone in order to give a more accurate suggestion of the color of the complexion of a certain sitter, or to correct the color values of the hair or dress in another. But surely every competent photographer has his employees under control to that extent. Would a print really gain in individuality if the photographer would retouch the negative himself? I hardly think so.

A man can impress his individuality upon his workmen. The architect invariably has to rely on the engineer and builder and their hundreds of workmen and employees to carry out his plan. The sculptor has to entrust his model to the bronze foundry or to "painters" who execute it in marble, sandstone, or granite. Even the painter has to engage assistants if he has some big mural decoration to do, and yet it is always the architect, sculptor, and painter who get the credit for the work, and rightly so, as he has conceived it and as it is carried out under his supervision. Why does not the same apply to the photographic establishment? True enough one may claim that all the

work mentioned belongs to a more or less utilitarian order, that it is not true art. But I was not aware that we were talking about art. I always took a photographic portrait for a utilitarian article.

Of course there is an expression which only becomes possible if a photographer would attend to every detail of the work himself. I mean the individuality we see in Steichen's or Coburn's work, but even then it refers rather to superior finish than to the rendering of character. And that sort of individuality is no longer any ordinary commercial proposition which Milton Waide has in view and which his disciples are after.

The "one man method" applies only to the owners of small establishments. I do not see how the system of larger galleries can ever be changed, and every man who is truly successful in a big business way will have to conform to it sooner or later. For the one-horse-town photographer, the small gallery man, on the other hand, the Waide method is the most perfect one imaginable. It means the solution of many problems to him. He will be able to do away with help, turn out good work and enough work to make it pay, for Milton Waide claims that his system has enabled him to produce four times the output he did at the beginning of his experiment and in one-half the time than required for the work. If his disciples are as alert as their master, good successful photographers will soon be on the increase all over the country, for there is no doubt that they will come flocking to his school. A system that constantly narrows down the necessary work and yet improves it in quality must meet favor with every beginner, and Milton Waide has a special talent for dealing with beginners, to impart fundamental knowledge. With this I do not wish to imply that he is not equally efficient in giving advanced instruction, but the majority of photographic pupils, I dare say, are people of moderate and medium intelligence. They would not comprehend if Pirie MacDonald or Hollinger were talking to them. They want the kindergarten style of instruction, everything has to be made clear to them, in simple, direct terms and in a serious sympathetic manner. They have to get one thing down fine first before they dare tackle another. There is no use of eloquent language and high falutin metaphors if one talks about local intensification or reduction. Talk common sense, explain facts in plain language, "don't guess; know! that is the way to be successful with one's pupils, and that Milton Waide can do better than any man I know in the photographic field. It will be the success of his school.

GASLIGHT DEVELOPING PAPERS.

BY T. THORNE BAKER.

THE convenience of printing papers which give a black and white result, and which can be worked in full gaslight—meaning comfort and convenience to the user—is so great that gaslight papers have attained a popularity quite unique, and they have, to use a hackneyed phrase, "come to stay." A consequent evil is that these papers are used indiscriminately, and many a bad print is therefore made; gaslight papers have distinctive qualities, and these we shall briefly discuss so that their suitability may be considered when necessary.

There are three sensitive compounds of silver in common use for papers

which can be printed in artificial light: silver bromide, silver iodide, and silver chloride. It is the chloride of silver which is employed for the slowest emulsions. Paper coated with an emulsion of silver chloride is so slow that a moderate exposure to weak gaslight will not fog it; hence the reason we are able to develop such paper in gaslight. Needless to say, undue exposure will fog the paper, and there is a limit to the freedom which can be exercised with the light.

But the chief feature of silver chloride is that it so readily yields an intense black. Once sufficiently exposed, a developer can reduce it with ease to the blackest form of metallic silver. This is partly due, be it said, to the extreme fineness of grain which is a feature of a gaslight emulsion; the finer the grain the deeper the blacks, is an old but correct photographic axiom.

Another point—a distinct failing of silver chloride—must be noted. This is the very great *contrast* which paper coated with a chloride emulsion yields. It is owing to the steepness of gradation in gaslight papers that the question of choice of a developer is such an important one, and how to overcome this peculiarity we shall discuss in due course.

Let us assume for the moment that our reader has not dealt with a gaslight development paper up to the present. A word of caution may then be given against unduly exposing it to the light. We see the phrase: "No dark room required" very often in connection with these papers, but "no dark-room" does not mean that no caution need be observed. It will be found a good plan to invest in a penny No. 3 Bray's burner, and to use this for the work-room illumination. You can safely load the printing frame and develop the paper six feet from such a light, and eight feet away from a No. 5 Bray, or an eight candle-power electric glow-lamp. If you are using incandescent gas, then it will be safest to use it only for exposures; and if you wish to develop in this light, stand a few feet away, interposing your body between the light and the dish so that direct rays do not reach the paper.

One word more in connection with lights. If you are at all near the light when loading the printing-frame, each time you open the envelope to take out a sheet of paper the rest of the sheets become exposed at the open end; this happening a dozen times *may* be sufficient to fog one end of the last few pieces; hence, use as little light as is convenient for opening the packet of paper.

There is a noticeable difference between some of the makes of gaslight papers at the present time; some give a more vigorous image than others. It is, therefore, a good plan, if the reader intends making any extensive use of these papers, to try two or three brands and see which suits his class of negative best. As à general rule, it may be said that really harsh and dense negatives should be looked upon as useless for gaslight paper, as the prints will be too crude and vigorous. Moderately hard negatives can be dealt with by using the plain metol developer to be given later. Negatives of average contrast will be found to yield brilliant prints, often a trifle vigorous, but the well-gradated negative which is inclined to be rather soft is the one which will yield the delightful grey-black pictures characteristic of a good gaslight paper. If a picture be too harsh, it can always be softened by subsequent toning, as a warm tone necessarily lessens contrast. A method of toning gaslight papers will be found in a later article.

Having chosen the negatives, then, which are likely to be suitable for the paper, we next come to *exposure*, the

word which sums up the most vital feature of the whole process! We speak of a dry-plate having great latitude, meaning that with various exposures we could by modifying development, if necessary, get good results in each case. Gaslight paper, then, possesses very little latitude; if over-exposed, the prints will be a poor grey or else intensely black, according to the degree of over-exposure. If under-exposed, we shall never be able to force up the shadow detail.

Exposure should consequently be most carefully carried out, and rather than vary the time, we are going to suggest varying the distance of the printing-frame from the light, according to requirements. The most convenient way to manage this is to have either a gas burner fixed at one end of the bench or table, or to attach a flat stick or lath outward from the wall where the burner is.

A negative of normal character and of average vigor (if such a description may be used in these days of extreme views), is best exposed about six inches away from a fish-tail or Bray burner, whilst a dense negative may be exposed as near the flame as three inches; with incandescent gas nine inches to a foot distant is more suitable, whilst eight c.p. and sixteen c.p. glow lamps are quite comparable with Bray burners. Magnesium ribbon is risky, as unless the frame is some distance from the lighted metal, a central over-exposed portion is liable to make its appearance in the prints. Weak daylight will give excellent results, but as it varies almost every moment, the pictures will generally lack uniformity.

To return to the scale and lamp, however. Let us suppose that, with a certain brand of gaslight paper, and a certain negative, we find that at six inches distance from the flame sixty seconds' exposure is sufficient; we mark that negative "6." But if now we have a very flat negative to print from, rather than give it, perhaps, thirty seconds at six inches from the flame, let us put it about eight and one-half inches away and *give it the minute;* such a negative should be marked "8½," and so on. In this way a uniform exposure of one minute is given, no matter what the negative be, and there is little doubt that you will find the most consistent and uniform results obtainable in this way.

What is the criterion of correct exposure? It has been observed that with a gaslight paper correct exposure is essential to success; how then are we to know when it *is* correct? A rule we have found answer with most papers is to find what exposure is required for the print to completely develop in twenty-five to thirty seconds; this holds good with either amidol or metol-hydroquinone, provided the developer does not contain too much bromide. The prints gain a subtle depth in fixing, and in drying they appear to increase in depth again, so that when they are taken out of the developing dish they should be under rather than over developed.

In order to control the gradation, then, it will be found best to modify the developer, not the exposure. We can get a moderately soft print or a vigorous print according to the composition of the developing solution, though *brilliant and vigorous prints* are characteristic of gaslight papers, unless, of course, a very soft negative be chosen.—*Amateur Photographer.*

———

Flashlight silhouettes can be easily obtained by stretching a white sheet across an open doorway; posing the sitter in profile on the same side as the camera, and turn down all the lights and ignite the flash on the other side of the sheet.

THE RECEPTION ROOM.

THE up-to-date photographer cannot spend too much thought on his reception room. From a business point of view it is the most important part of the establishment. It is here that the prospective sitter obtains that most important first impression, which, if it does not actually lead to the making or marring of an appointment, frequently has great bearing upon the spirit in which proofs are received. A tasteful reception room will give the sitter a reassuring idea as to the status of the business and will lead to a more confident order. A slovenly, patchy, or even an over ornate, room will lay the germs of misgiving that will tinge all further transactions, leading, if not to dislike of proofs, to a very guarded order. Moreover, good specimens tastefully displayed tell their own story, and orders for more expensive work than that otherwise intended should result.

Nothing out of the ordinary in the way of decoration is required. Good quiet wall-covering, artistic artificial light fittings and woodwork, whilst the furniture should be solid, substantial, and good, but not in any way gaudy. When decorating a room one must remember that a certain amount of repetition has to be introduced. A very good rule is to decide on a scheme in two prevailing colors, and stick to them, introducing as little as possible of any other tint. Blue and green are a good combination, so are brown and green or brown and cream. Cream and red, too, is a splendid combination, but not satisfactory for a reception or show room, where the great necessity is that the wall-covering should be quiet, dark, and unobtrusive, so that pictures are shown off without any detractions.

When choosing wall-covering, therefore, it must not be chosen for its own inherent beauty, but for its value as a background for pictures. It will scarcely be necessary to add that papers with very small indefinite patterns in self color or quite plain papers or fabrics are the only suitable ones.

When selecting furniture, go in for straight lines and plain square features. Turning usually looks cheap. Avoid carving unless you can afford real antique. Carpets, of course, vary; the very dear Donegal carpets at $10.50 a square yard are unapproachable, though the Gobelin art squares are equally artistic, and about two dollars per square yard. Art canvas cannot be beaten as an artistic wall-covering, and, if broken into panels with a simple moulding, the result is rich and impressive. A good plain paper, however, will look well if a suitable frieze is chosen, and the furniture, etc., satisfactorily harmonizes. We should advise the prospective purchaser of art canvas to get plenty of patterns, for the material from different firms varies greatly in price.

A good table should be obtained for showing mounted prints, since it is very inadvisable to keep specimens scattered about; one with a shelf underneath is useful. So also is a chest of drawers with glass top and receptacle for miniatures, colored work, or any special goods which it is desirable to give an added suggestion of value. The drawers should be shallow, say three inches, and, if provided with movable trays to hold specimens, are very useful.

The mantelpiece and overmantel may be made into very valuable pieces of furniture, and it would pay to have one designed by an artist with the special idea of its position in a photographic show room. A mirror should not be included, the space being more profitably and

suitably occupied by panelling, against which the framed pictures will show to greater advantage. If, however, it is not desired to make a feature of this important adjunct to the room, simplicity may once more be relied on to demonstrate its pictorial value. Do not go in for the elaborate marble arrangements so popular during the Victorian era, but rather have a simple wood mantel harmonizing with the furniture and tiles, agreeing in color with the general scheme. The grate itself should not be highly polished or elaborated with ornament. The pictures to be hung on our walls should have frames that not only harmonize with the prints, but also with the walls. It will almost be unnecessary to warn the reader against gilt frames.

Above all, do not crowd the walls. A very few perfect specimens have a most pleasing, restful, and tasteful affect, quite different from the general tone conveyed by overcrowded walls, where a multitude of specimens kill one another and defeat the ends of the photographer who wants, by his exhibition, to convey an adequate idea of the work done. Touching on this subject one may refer again to the mistake of overcrowding tables with unframed specimens. Two or three in tasteful folders are quite sufficient to have lying loose; the others should be kept in trays easily brought forward and returned. The slovenly effect of a number of photographs lying jumbled up and necessarily dirty is very distracting and harmful. It would be just as well to classify these trays, such as men, ladies, children, heads, three-quarter, etc., for, as any one of reception-room experience knows, the prospective client has usually very definite ideas as to the position, etc., required before entering the establishment. The proprietor himself should occasionally go through the specimens and weed out the worn and old.

It is, we think, a great mistake to have a counter in the reception room, for this is much too shoppy. Facilities for writing must, however, be handy, and a neat desk of the pedestal type will not be out of place in an inconspicuous position.

The old-fashioned album has almost disappeared, though a few silvers or other cheap line kept in them very effectually transfers a client's ideas to platinotype and carbon. It is useful, however, to have a book with plain leaves and thick guards into which to place the modern paper mounts one on a page. If the prices and name of the style are appended it is often more comprehensible than voluminous explanations made by the receptionist.—*British Journal of Photography.*

NEWS AND NOTES.

Daguerre's First Photograph.—Mr. W. Gardner, M. I., Mech. E., sends to the *Westminster Gazette*, (London), an interesting note apropos of the statement made the other day that Lord Avebury was the first person photographed in England by Daguerre: "It might (he says) interest your readers to know that my uncle, Andrew Shanks, a well-known engineer in London a generation back, was personally acquainted with M. Daguerre, and visited him in Paris up to the time that he had invented his process for taking photographs. Up to that time M. Daguerre had never attempted to take portraits, but simply architectural subjects and landscapes. My uncle suggested to him that he ought also to apply it to portraiture. M. Daguerre replied that if he would sit down he would make his first experiment upon himself. This challenge my

uncle accepted, and he sat for one hour in brilliant sunshine in order to have his portrait taken by the new process. This portrait is still in existence, and in possession of my mother who had it given to her by my uncle." It is an undoubted fact, adds Mr. Gardner, that this is the first photograph ever taken by Daguerre under his patent process—viz., the Daguerreotype.—*British Journal of Photography.*

THE new Spanish banknotes have a fine steel-plate engraving back and front, with a special color ground in specially chosen colors for the prevention of imitation by photography, which is one of the most popular methods of forgery; in fact, nearly all banknote forgeries are photographic in origin; and the aim of the designer and engraver is to guard against this. The notes are of the value of 25, 50, and 100 pesetas respectively; each of the values contain a different picture in the way of vignettes, and each carries a different scheme of color work; all of them are considerably smaller than the dollar bill.

Platinum Hints.—In damp weather, Mr. D. Murray told the Wolverhampton Society, it was wise to dry the negative as well as the pads before platinum printing. Another useful hint was never to put out a negative to print, at this time of year, without being sure that the print would be finished before night, as if part of the printing had to be left over till the next day some of the brilliancy of the print would certainly be lost. When using old developer, either for sepia or black prints, it may be necessary to skim the surface to get rid of scum. It is sometimes an advantage to keep prints from hard negatives for twenty-four hours before developing; it softens them. An actinometer should always be used when printing-in clouds; it is convenient when making exhibition prints, as the eye cannot appreciate minute differences of printing, and a very slight dampness may make the depth of printing appear more than it really is.—*Photography.*

Hints on Ozobrome.—Any grade of gaslight or bromide paper might be used for this process, Mr. Manly told the Croydon Camera Club. Both acid and alum in the hypo bath should be avoided, but metabisulphite might be used. The plaster should be pushed under the pigmenting solution face up, with a mop brush, using the brush to remove the air bells. The print and plaster are to be brought together with plenty of water in between; but when once they are in contact, care should be taken to see they do not move, or a double image will result. Strong sensitizing gives soft prints. Mr. Manly advised redeveloping the bromide print with amidol. The sensitizing solution, he said, might be bottled for future use. If it gave too soft a result, one dram of a five per cent. alum solution might be added to each four ounces of concentrated pigmenting solution.—*Photography.*

Commonsense in Picture-making. No problem in picture-making, said Mr. Pearce, is outside the pale of a "commonsense" decision; and in work of this nature the same commonsense should be brought to bear upon its problems as upon the more mundane questions of everyday life. "The sum of the whole matter of picture-making," said he, "is the story. Have something to say; something that is worth saying, and then, build around it all that you can to strengthen and emphasize it, to explain and verify it, and unhesitatingly prune away everything that detracts from it, or calls attention from it, or does not assist in its explanation."

PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK AND THE METROPOLITAN MUSEUM OF ART.

WE heartily commend the foresight of Mr. Pirie MacDonald, President of the Professional Photographers' Society of New York, in selecting the Metropolitan Museum of Art for one of the sessions of the approaching convention. Special arrangements have been made by which the Society will have the Museum practically to themselves for the whole forenoon.

In order to get the fullest possible benefit out of this privilege, the members will be taken through the galleries in two parties, one headed by Mr. W. M. Hollinger and the other by Mr. E. B. Core. We cannot imagine a more delightful way of seeing the pictures than under the guidance of either of these gentlemen. They are equally well known for their good work as for their genial and enthusiastic interest in their fellow-workers.

Thoroughly well acquainted with the pictures to be seen, they are keenly alive to the advantages to be derived from their study. We are sure that their informal talks on the good points of the various pictures will be not only much enjoyed by those who are fortunate enough to hear them, but also instructive and helpful in the highest possible manner.

Under the directorship of Sir Purdon Clarke the Museum has increased its interest and usefulness in a very marked manner. Next to the art student no one can derive quite so much benefit from such a magnificent collection of pictures as the photographer, and Mr. MacDonald has been quick to turn it to good account for the betterment of photography.

Gathered together under one roof are priceless examples of the "Old Masters" and some of the finest examples of our greatest living painters. Beginning with gallery number 11 we have two fine examples of portraiture by Maes and Vries—it will be understood, of course, that the galleries are full of interesting pictures; we only mention the portraits that are of special interest to the professional photographer.

Gallery 12 offers many subjects for careful study. Sargent, Alexander, W. M. Chase, Will Low, Eastman Johnson and Sir Joshua Reynolds, Sir Peter Lely and Gilbert Stuart being well represented by splendid examples. In this gallery the pictures demanding special attention are the three Sargent pictures—portraits of W. M. Chase, R. L. Stevenson and "A Lady in Black;" a portrait of Walt Whitman by Alexander, and a "Spanish Dancer" by Chase.

Gallery 13 contains many of Gilbert Stuart's works. Gallery 14, containing the Henry G. Marquand Collection, usually the most interesting gallery in the Museum, is at present somewhat depleted; the few pictures hanging, however, are amongst the finest in the collection. In the centre is Sargent's celebrated portrait of Henry G. Marquand, for many years President of the Board of Trustees and a generous benefactor of the Museum, flanked on the left by a portrait by Frans Hals and on the right a portrait by Holbien—a trio that will repay much careful study. In this room there are also three examples of Velazquez and two more of Frans Hals.

Gallery 15, containing the George A. Hearn collection, is specially rich in examples of the English portrait painters —Gainsborough, Sir Joshua Reynolds, Sir Peter Lely, Sir Thomas Lawrence, Sir James Thornhill and John Hoppner.

In this brief account of the Museum we have only mentioned five of the twelve galleries and only a few of the best-known pictures in each; sufficient, however, to show that the photographer who has an opportunity to see them under such favorable conditions as are offered by this special session of the New York Convention is to be congratulated. We predict that it will be the most popular, interesting and helpful meeting of the convention.

Presidents of conventions meeting within reach of such art centres as Chicago, Boston, Philadelphia, Cleveland, St. Louis and Baltimore would do well to follow President MacDonald's lead.

THE NEW COPYRIGHT LAW.

THE following extracts from a mass of letters received by President Falk of the Copyright League, indicate that the photographer is beginning to realize that the amendment proposed by the American Newspaper Publishers' Association, if incorporated into the new bill, will work a very serious injustice to the profession.

If you have not written to your representatives, do not fail to do so now. You owe it to yourself and your craft. A form of petition is given below.

The amendment of the Publishers' Association reads:

"Provided, however, that the reproduction of a photograph in any newspaper by the process known as stereotyping shall not be construed as an infringement of the copyright of such photograph."

"This amendment strikes me as the most charming attempt at highway robbery I ever heard of." BURR MCINTOSH.

"It will be a calamity if that amendment should pass." PACH BROS.

"I hope Congress will block such an infamous piece of injustice." W. G. C. KIMBALL.

"Matters have indeed come to a pretty pass if a photographer is not entitled to copyright the product of his own brain—to say nothing of the license the newspapers will have if they are allowed to reproduce photographs of everything and everybody that come into their possession."
RUDOLF EICKEMEYER.

"Should this law pass *with the proposed amendment*, it will add further to the scandalous rights and privileges of yellow journalism and seriously affect the protection of our patrons."
H. SCHERVEE.

"If this amendment goes, it certainly queers the copyright law pertaining to photography."
F. J. HAYNES.

"The amendment proposed by the American Newspaper Publishers' Association would affect our profession neither more nor less if, instead, it read as follows: Provided, however, that the reproduction of a photograph by the process known as printing shall not be construed as an infringement, etc. To ascertain how its authors would like their own medicine, suppose our profession should ask for the adoption of a counter-amendment to read as follows: Provided, however, that the reproduction of any book or magazine or newspaper article or other printed matter copied by the process known as photographing, shall not be construed as an infringement of the copyright of such book, magazine or newspaper article or other printed matter.

"Under such provision such works as cyclopedias, dictionaries, etc. (which involve the outlay of tens of thousands of dollars) could be put on the market at very low price, and under sanction of law, but it would require a fine legal mind to demonstrate that it was not theft in the case of either the pending amendment or the one proposed herein."

"Aside from subterfuge, which is scarcely thinly veiled, the amendment might as well say: Publishers of books, magazines, newspapers, etc., *are a special class and exempt from copyright laws.*"
KEYSTONE VIEW CO.

"The press has profited and preyed so long on our work that it is hard for them to think of giving it up. Let them all employ their own photographer, as some of them do, thus giving employment to workers in our profession, or else pay for what they must have when produced by us, who depend upon their work for support of self and family." A. A. BISH.

"If this amendment is adopted, it will mean the killing of the Bill, as far as protection to the photographer is concerned."
WALTER L. GRAY.

"The injustice of the proposed amendment is apparent and the rights of the photographer are therein ruthlessly trampled upon."
THE LENS AND BRUSH CLUB OF TOLEDO.

NEW YORK, January 7, 1907.

MY DEAR SIR:

The Petition which is enclosed relates to an amendment proposed by the American Newspaper Publishers' Association to the New Copyright Bill.

It is the most unheard-of and impudent attempt ever made to legalize robbery. The newspapers are trying to separate our profession from the other classes protected by copyright, so that they may use our work without our consent and without paying us. The New Copyright Bill now before Congress is *fair*, it gives photographers the same protection for their work—no more, no less—that it gives other producing interests.

The Petition tells just these facts and some reasons why the Amendment should be rejected and the Bill passed as it is.

Address the three copies of this Petition herewith enclosed, one to each of your United States Senators and one to the Congressman of your district,—sign and mail *at once*. No time should be lost—as this is a *crisis in our history*, requiring quick action if American photography is not to be degraded in the eyes of the world.

If, instead of sending these printed Petitions, you have the time to write *personal letters* embodying the same subject matter in your own language, it would undoubtedly carry more weight, —especially if you are personally acquainted with your Congressman or Senators,—but whichever you send, be sure to *mail within twenty-four hours*.

A reply, by wire or otherwise, giving the names of those to whom you have written or sent enclosed Petitions will be much appreciated by,

Yours fraternally,
B. J. FALK,
President.

TO THE HONORABLE:——
Care of Capitol, Washington, D. C.

DEAR SIR: The following amendment to the New Copyright Bill was presented by the American Newspaper Publishers' Association and is now before the Joint Senate and House Patent Committee.

"*Provided, however, that the reproduction of a photograph in any newspaper by the process known as stereotyping shall not be construed as an infringement of the copyright of such photograph.*"

If adopted, this amendment would mean that the photographers of this country would be deprived of all property rights in their own productions as far as the newspapers are concerned.

If adopted, all privacy rights in photographic portraits would be absolutely destroyed, even though such portraits bore the imprint of United States Copyright, and you could no longer protect by copyright your own photograph, or that of your mother, wife, or daughter, from unauthorized publication by any newspaper.

If adopted, this amendment would lower the present high standard of the American photographer. There is no other country in the world whose copyright laws contain special legislation against the photographic profession, allowing its work to be preyed upon by another class of publishers.

If adopted, this amendment would eliminate the incentive for invention and that stimulus for doing better things which the Copyright law was designed to promote.

The restriction as to "stereotyping" mentioned in the amendment is but a specious one, and no protection to the copyright owner. It is well known that all news-sheets are printed from stereotypes, and that a stereotype covers practically any known process of reproduction, halftone, line etching, etc.

The right of reproduction might therefore as well be given them *absolutely* as in this form.

Under the Constitution a copyright is an *exclusive* right, and we submit that the copyright law is primarily to protect producers in their work and not primarily to assist those who wish to appropriate such work. Were the newspapers to receive legal sanction (as proposed in this amendment) to seize our property, even though copyrighted—*for their own profit, without our consent and without pay*, a privileged, predatory class would be created in direct violation of the entire theory of copyright law.

Therefore we do most earnestly protest against this proposed amendment, or any amendment which would accomplish the same or a similar purpose, and we ask your influence and support in favor of the New Copyright Bill as originally presented, without any amendment as to its photographic provisions.

Very respectfully yours,

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PICTORIAL COMPOSITION FOR BEGINNERS IN PHOTOGRAPHY.

BY J. W. RIDPATH.

THE following interesting paper on Pictorial Composition read before the Photographic Section of the Franklin Institute, December 6, 1906, was illustrated with the aid of a large number of lantern photographs appropriately selected to elucidate the points dwelt upon by the speaker.—ED. W. P. M.

Pictorial photography is a very broad subject. It deals with selection of subject, grouping, composition, light and shadow, focusing, making of negative and after-treatment of the same, printing and mounting, each being a separate step toward the finished picture. For the present purpose it is intended to speak briefly upon only one branch of the subject.

Pictorial composition is based upon certain well-established and generally accepted rules, or general principles, which, although somewhat elastic, are found to be generally observed by artists everywhere. Some say art is subject to no set rules, for its variations are infinite; yet nearly all agree that it has certain general principles. In fact, almost all pleasing pictures, whether paintings, drawings, etchings, photographs, or made by any other process, are found to be based upon some of these rules.

In a short article like this, it is only possible to refer briefly to a few of the more important or fundamental rules of composition, omitting such subjects as lighting, atmosphere, balance, etc. A careful observance of the following nine rules will greatly aid the young photographer in making more pleasing and consequently better pictures:

1. In selecting a subject to photograph there is always a principal object, that which you want a picture of. It should, if possible, be placed to one side of the center and below or above the middle line. In other words, place the principal object in one of the natural quarters of the picture space. The principal object should, if possible, be supplemented by one of lesser importance as a secondary object. If the view contains trees, a position may be selected where a handsome or picturesque tree will occupy a point near the camera, in or near the foreground, as the principal object. This might be supplemented by a small tree of somewhat similar shape in the middle distance. A group of men or women might be supplemented by a group of children placed at a little distance. A church or other important building, in perspective, might be supple-

mented by a smaller building in another part of the picture.

2. Objects should be few in number and simple in character. A group of two or three trees looks much better than one showing an extensive and elaborate collection of shrubbery. The latter may look beautiful to the eye, but the former will yield a more pleasing picture. One shock of corn, well to the front, with a few others less distinctly shown in the distance, is much better than a number of shocks, equally spaced, at nearly the same distance from the camera. Two or three figures may be satisfactorily grouped, but to make a picturesque group of a dozen will require artistic skill of a high order.

3. In order that your picture may look natural, the surroundings should always be in keeping with the principal object. To illustrate: A lumberman's or huntsman's camp may look well in the forest. A fisherman's boat and nets should be beside water. A wagon loaded with logs might appropriately be coming out of the woods. A farm team should be engaged at some regular farm work, with appropriate surroundings, such as ploughing, hauling grain, raking hay or any other usual farming operation. A quaint stone arch, or rustic bridge, may impress you favorably; if so, you will find that a willow tree, group of shrubbery, or even a bunch of tall weeds, if near the camera, will add greatly to the picturesque effect.

4. The principal forms of composition are three in number. The angular form may be illustrated by drawing an imaginary line diagonally from an upper to a lower opposite corner; thus dividing the picture space into two triangles. The principal object may be advantageously placed in the lower triangle; the secondary object may be placed in the lower half of the upper triangle as middle distance, while the upper half of the upper triangle is occupied by the sky or other background. Sometimes a very handsome angular grouping is effected by placing the principal object in the upper triangle of the picture space with the secondary object in the lower triangle.

5. The pyramidal form of grouping is particularly good for strong objects; being shaped like a mountain it gives an idea of stability. The tall tree, church-tower, a house in perspective or tallest man in a group, occupying a somewhat central and commanding position a little to the right or left of the centre of the picture space, might form the basis of a good strong composition.

6. The circular or oval forms are light and graceful and lend themselves naturally to groups of shrubbery or flowers, and still-life objects; curved or radiating forms are quite plentiful in nature. The dependant branches of the elm and willow, the oval form of the violin, many articles of glass and porcelain, the spray from a fountain, a vase filled with flowers, the oval form of the human face and indeed the long oval of the human frame, are illustrations of this graceful form of composition.

You do not always find objects that compose readily; perhaps the fault is in the objects themselves; perhaps it is the wrong time of day, or time of year; conditions are not always alike. Change your position slightly and look again. If the image on the ground glass is not pleasing, why expose a plate?

7. It is important that the principal lines of the picture be so placed as to enhance its beauty, otherwise they may detract from it. Generally the horizon or sky-line in out-door pictures should be placed about one-third distance from the top or the bottom, not half-way up. In many cases the sky-line is quite important. A gently undulating background with hazy distance, being suitable for peaceful farm scenes. Rugged mountain scenery might appropriately have a saw-tooth or jagged sky-line.

8. All important lines, such as fences, roads, streams, etc., should lead into, not out of, a picture. They should be so placed as to lead the eye unconsciously toward some point of general interest. For the above reason a cross-road picture is seldom pleasing. If the important lines conform to Hogarth's line of beauty, a graceful double curve, they will greatly enhance the beauty of your picture.

9. Figures, if included in a landscape or other view, should always be appropriate in character, and in keeping with the surroundings. A farmer at work in the fields, dressed in his working clothes, is more picturesque than the same man in his best bib and tucker entertaining company on the front porch. A hod carrier would look better with a pipe in his mouth than smoking a cigarette. Two girls in sunbonnets, picking blackberries, might add life to the scene; but two young ladies dressed in silk and lace, wearing ostrich plumes in their hats, would be out of place among blackberry briars. Perhaps there is no more certain way to spoil an otherwise good picture, than to pose your cousin or best girl in the picture centre, with nothing to do but stare at the camera. If you must place her in the range of the lens, give her some appropriate employment, such as picking daisies, golden rod, or other wild flowers; but if you value her friendship, don't have her looking at the camera. To do so will probably spoil the composition, and the portrait is almost sure to be disappointing.

Some persons may object that these rules, or general principles, are not practical; that many views cannot be artistically grouped. It is certainly true that many views are quite commonplace, having nothing picturesque in them. In an afternoon's outing the camerist may pass a hundred views, many of which have some attractiveness; but only one or two appeal to him. While you cannot move the wayside cottage or trees, you can move the camera. Select the most important object and give it a strong place in the picture space, a little out of the centre. Select a few objects, not too many, as accessories; most views contain too much. Try to find a suitable foreground. Move a little nearer or farther away; to the right or left; raise or lower your camera. While the principal object should occupy a strong place, the view should be considered as a whole, unity or oneness being all important. Examine the image on the ground glass and select the best viewpoint. If you spend a little time intelligently studying the scene, the chances are that you will secure a much better picture than you could by a "hit or miss" method. Remember that one good picture is worth more than ten poor ones.

DEVELOPMENT WITH AMIDOL.

BY C. WELBORNE PIPER.

THE value of amidol as a developer for bromide paper is fully appreciated by most workers, but many abandon it solely on account of its inconvenience. The usual developer, consisting of amidol and soda sulphite, does not keep well mixed, neither does the sulphite alone keep well in solution; hence the developer has to be freshly made up when required. It happens, however, that though a solution of simple soda sulphite speedily deteriorates and becomes useless for the purpose of development, yet such a solution if neutralized with potassium metabisulphite will keep well and be serviceable for an almost in-

definite time. Therefore, if a neutralized stock solution is kept handy an amidol developer can be made up at a moment's notice.

This neutral sulphite solution should contain one part by weight of potassium metabisulphite to every four parts of soda sulphite, and a convenient strength is four ounces of soda sulphite and one ounce of potassium metabisulphite to the pint. For all practical purposes this may be considered to be equivalent to a solution of soda sulphite containing five ounces to the pint, and any of the published amidol formulæ may be made up upon this basis, even though it is obviously an incorrect one.

A peculiarity of the developer thus made is its keeping qualities while in use. It can be used repeatedly for many plates or prints in succession, and it will be clear and work well when a developer made with a plain soda sulphite is nearly exhausted and very dark in color. In the unused condition it does not keep any better in stock solution than the ordinary formula. That is to say, a weak solution of normal working strength will not keep in perfect condition for more than twelve to fourteen days, while a concentrated solution will not keep at all. But when once used there is a marvellous difference, for while an ordinary formula is done for an hour or so after use, I have used successfully a developer made up with the neutral sulphite a week after it had been employed for the development of several negatives.

It should be noted that satisfactory results cannot be expected with amidol that is not in good condition itself, apart from the condition of the sulphite. Stain generally results if the amidol itself is stale, and it is advisable to use it only when either white or light grey in color. Dark grey amidol is very prone to give stain, while if any blackness is observed the salt is usually worthless. When in perfect condition amidol is completely soluble, and gives an almost colorless developing solution.—*B. J. Almanac*, '07.

PHOTOGRAPHS WITH BAS-RELIEF EFFECTS.

BY GUSTAVE MICHAUD,

Costa Rica State College.

PICTURES of bas-reliefs owe their remarkable appearance to a peculiar distribution of light. They lack the contrasts which result from differences in distance. One side is sharply illumined directly and by light reflected on the background; on the opposite side a shadow, cast on the same background, increases the degree of the relief. When these modifications are made in any drawing, relief effects are the result. I devised and tried various methods for producing these while printing photographs, by the superposition of two negatives. These attempts were fruitless, but I obtained better results by the superposition, under certain conditions, of a negative and a transparent positive. Glass plates cannot be used for both the negative and the positive transparent mediums; the printing is not done, as usual, with the film facing the paper, and, owing to the appreciable thickness of the glass, the image would be blurred. If the picture is small, as in the case of an ordinary portrait, a postive film may be used with a glass negative. If a larger picture is desired, this method will fail, as the

positive film contracts during the developing process, and after it no longer coincides with the negative, except over a small area. The best results are obtained when the following process is used:

Select a fairly good negative plate, and make a positive glass transparency with it. Then, with the same negative plate, make a positive film, and with the positive plate make a negative film. Both films having gone through the same baths will contract equally, after being printed, and then their coincidence will be perfect. When developing the positive film, see that it be not darker and more strongly contrastive than the negative. If such were the case, the final printing would bring out an intaglio effect instead of a bas-relief. When the films are dry, place them in the printing-frame so as to get perfect coincidence. As the negative brings a shade behind every light of the positive, the transparency is flat, that is, almost without contrasts. Move one film a trifle diagonally, so as to destroy slightly the conicidence. Intense lights and deep shadows will suddenly be cast on opposite sides of every relief or hollow part. Keep the film in that position with one hand, and with the other place a sheet of sensitized paper behind it. Print in the direct light of the sun, without interposing a ground glass.—*Scientific American.*

GASLIGHT PAPERS.

BY F. J. MORTIMER, F.R.P.S.

THE introduction of a photographic printing paper combining the good qualities and characteristics of bromide paper, without the necessity of a dark room for its manipulation, has added another power to the already large equipment of the photographer, and at the present time there are few photographers who have not appreciated the convenience of working gaslight papers in an ordinary room with the lights burning. The ease, too, with which warm tones can be obtained on gaslight papers by mere prolongation of the exposure and dilution of the developer has caused them to be received with favor by amateur workers.

The emulsion used for these papers is a chloro-bromide—that is to say, a mixture of chloride and bromide of silver, and to this must be ascribed the ease with which warm tones can be obtained, and also the slowness of the paper, which is, on an average, about thirty times slower than bromide paper.

The Best Kind of Negative. The kind of negative that gives the best print on gaslight paper is one that is almost too thin to give a good P.O.P. print. It is possible, with correct exposure and development, to obtain a plucky print on gaslight paper from a thin negative that will not give a possible result with any other printing process.

Negatives of average density, rather inclined to softness, will, therefore, probably give the most satisfactory results, and negatives that are extremely hard will be found most difficult to deal with. These will require exposure to magnesium light or daylight to give the best result.

Light for Working Gaslight Papers. Gaslight papers, of course, have received their name from the fact that they can be manipulated in gaslight, that is without any dark room, but whilst it may be necessary to work them in actinic light occasionally, for turning them out in quantities, it is certainly advisable to use some non-actinic medium in the dark

room lantern; for this enables one to work with greater freedom and with a total absence of fog. The color of the medium, however, can be very light, either a very pale yellow, or simply a piece of matt opal, or one of the pleasantest lights of all is that given by light chromium green glass. Both these will give a brilliant illumination all over the room, and yet be perfectly safe, even when the most sensitive of these papers is worked close to the lamp.

Most workers, however, will prefer to manipulate the paper in an ordinary room lit by artificial light, such as gas or electric light. Weak daylight may also be used if preferred, but whatever the source of the light may be, it should not be allowed to shine directly on the paper.

The packet of paper may be opened and the contents safely handled for the purpose of placing in the printing frame and developing at a distance of eight to ten feet from a full flame gaslight, or nearer if the light is turned down. If incandescent gaslight is used, the paper must be much more carefully guarded, and the operations should be conducted with one's back turned to the light.

Exposure. The paper is placed in contact with the negative in the printing frame, and the exposure is made while holding the printing frame at a distance of about six inches from an artificial light, or two feet from a window, covered with one thickness of tissue paper. Length of exposure varies with the density of the negative and the strength of the light.

Daylight exposure is uncertain on account of the varying strength of the light, and artificial light is to be preferred. The most convenient method is to use magnesium ribbon, and the following table will be of some guide:

For a thin negative burn 1 inch of magnesium ribbon at a distance of 3 to 4 feet from the printing frame.

For a medium negative burn 1 inch of magnesium ribbon at a distance of 30 inches from the printing frame.

For a normal negative burn 1 inch of magnesium ribbon at a distance of 24 inches from the printing frame.

For a dense negative burn 1 inch of magnesium ribbon at a distance of 12 inches from the printing frame.

The magnesium ribbon is held in a pair of pliers or between two pennies, and ignited by a candle flame or spirit lamp, and one inch should always be used, the distance between the light and the printing frame being varied to suit the negative.

Using ordinary gaslight six inches from the negative, an average exposure is one to two minutes. Incandescent gaslight and electric light, being much more actinic, will require shorter exposures.

The following table will serve as a guide with a negative of average density:

Diffused Daylight.—6 feet from window, 3 to 6 seconds.

Paraffin Lamp.—2 to 3 minutes at 6 inches.

Gas Burner (ordinary batswing burner)—1 to 2 minutes at 6 inches.

Incandescent Electric Light (16 candle-power)—30 to 40 seconds at about 6 inches.

Incandescent Gaslight (50 candle-power)—About 15 to 20 seconds at 6 inches.

For three and one-quarter by four and one-quarter and smaller sized negatives, if shorter exposures are desirable, the distance may be reduced to three or four inches. The exposures at three inches will be one-fourth of those required at six inches; on the other hand, at twelve inches they would have to be increased four times.

The best and most economical means of finding the correct exposure is to cut a sheet of the paper into slips, and, by placing a piece across a representative part of each negative, make trial exposures. When prints have to be done from various negatives, an excellent plan is to classify them according to their density; then, by exposing the thinnest one first, and going progressively through

them to the densest, the exposures can be very easily calculated.

If the negative to be printed from is denser on one side than on the other, the dense side should be brought more directly opposite the light, or the frame may be placed at an angle to it. Further exposure may be given to dense patches by waving a lighted wax vesta close to these particular parts of the negative either before or after the usual exposure.

Development. It is an open question as to the best method of developing gaslight papers, but there is no doubt that a full exposure and a very brief development with a strong developer will give the longest scale of gradations with the most satisfactory color of image; that is, if black tones are required.

The following developer will be found to give excellent results:

Metol	8 grains.
Hydroquinone	30 grains.
Sodium sulphite (cryst.)	¾ ounces.
Sodium carbonate (cryst.)	¾ ounces.
10 per cent. solution of potassium bromide	20 drops.
Water	10 ounces.

This developer keeps indefinitely in a well-stoppered bottle.

The amount of bromide determines the color of the finished print. Too much produces green prints, and insufficient blue with a tendency to fogged whites.

The exposed paper should be placed face upwards in a clean developing dish and the developer flowed with a sweeping motion over it, so that it covers all the paper at once, and developing marks are thus avoided. The image should flash up very rapidly, and development should be complete in about twenty seconds with normal exposure and at normal temperature. A careful watch should be kept for bubbles adhering to the print; these should be broken with the tip of the finger. If development is not completed within thirty seconds, unless the developer is exceedingly cold, or diluted, or additional bromide has been used, it may be taken for granted that the exposure has been insufficient. Nothing is gained by trying to force development. It merely conduces to fog through prolonged exposure to the light, or to yellowness from the developer.

The same developer may be used for several prints in succession, so long as it remains free from discoloration. It should be returned to a measure after the development of each print, ready to flow over the next one. When a number of prints are being done, a little fresh developer should be added from time to time to keep up its bulk and energy.

If the prints are large they may be immersed in water before development until limp.

A developer that gives brilliant blue-black tones is amidol.

The ingredients should be dissolved in the order named, the sulphite being dissolved before the amidol is added:

Sodium sulphite	500 grains.
Amidol	50 grains.
Potassium bromide	2 grains.
Water	½ pint.

This developer will only keep good for three days. After that time it should be discarded, and fresh made up.

If development is prolonged the shadows will readily block up, thus giving more contrast if desired. Some operators prefer to so adjust their exposure to the developer that the print can remain in it until finished. When working in quantities this course is no doubt satisfactory, but even then we prefer to give such a generous exposure that the print must be removed very quickly from the developer, before development ceases; in fact, as we have found that in working by this method a much longer scale of gradation is obtained, there is less blocking up of the shadows and absolutely no tendency to fogged or stained edges—a fault which prolonged or forced development is very apt to cause.

To arrest development some use an acid bath, but we think it preferable to wash the print quickly in plenty of water. This may be more trouble, but we have found, even when the prints are thus washed, that there is no increase in density, that is, development does not continue, and there is far less likelihood of stains in fixing.

As soon as full detail is out in the print, therefore, it should be rinsed for a second or two in clean water, and transferred at once to the fixing bath for ten minutes.

Sodium hyposulphite.....	3 ounces.
Water.....	20 ounces.

Fixing Bath. A fresh portion of fixing solution, and plenty of it, should be used for each batch of prints. Each print as it is developed and rinsed should be placed face upward in the fixing bath, and the dish be rocked for a few seconds so as to thoroughly immerse the print in the solution. Uneven stains may occur if prints stick together before they are fixed. The prints may remain in the hypo until the batch is done, except, of course, when the time is rather prolonged.

When great speed of development is attained, as in professional work, a stronger fixing solution will prove an advantage.

Stains. The fixing solution should, if possible, not be handled until all the developing is done, as even the minutest trace of hypo in the developer, or contact with hypo at any stage previous to fixing, will cause stains in the prints. Stains may also occur if the prints are allowed to rise above the surface of the hypo, or subsequent washing water.

Stains during fixation are also caused by allowing the prints to lie one over the other, particularly when not thoroughly freed from all traces of developer. If an acid fixing bath be used, and if the prints are thoroughly well washed prior to immersion in the same, and then kept well under the surface of the fixing bath and constantly on the move, there is very little chance of brown or yellow stains.

Other causes of yellowness or brown stains are: Too weak or exhausted developer, under-exposure and forced development, allowing the air to get at print while wet with developer, or allowing the print to be exposed to white light before being completely fixed.

Warm Tones by Development. To obtain warm tones with gaslight papers it is only necessary to increase the exposure and dilute the developer, or one may do both and add ammonium bromide and carbonate. Using a metol-hydroquinone developer, and diluting with water, it is easy to obtain any tone from black to red chalk by increasing the exposure in geometrical ratio.

If an exposure, say, five or six times as long as required for black tones be given, and a diluted and restrained developer is used, it will be found that the image will take much longer—perhaps one or two minutes—to come out, and when it first appears will be of a yellow or pale pink color. As development progresses this color will gradually change, the red becoming stronger and deeper, changing to a brown red, then through successive shades of brown to olive green. If the print is taken out at any stage of this process, fixed and finished, it will be found, *when dry*, to be of nearly the same color as when taken out of the developer, except that it will have gone back a trifle towards orange, and will appear stronger.

When a colored print is placed in the hypo it changes color and looks much weaker. It must not be judged in this condition; it will recover color and strength when quite dry. It will depend upon the exposure whether the correct stage of development as regards detail and strength of image has been reached when the desired color has been arrived at.

For example, suppose that a red print is desired, but that when the red stage is reached the image is not sufficiently developed out, by continuing the development the brown or brown-red stage will be arrived at, and a print of corresponding color will result. In order to get a red print it is necessary to expose longer, so that the image has developed sufficiently by the time the red stage is reached. On the other hand, if the exposure has been too long the requisite detail will appear before the red is deep enough; and if taken out, the print, when finished, will be yellow or orange; if left in until red, it will, when finished, be too flat and overprinted.

Calling black the bottom of the scale, and pale yellow the top, the higher the color desired the longer the exposure and the more diluted and restrained the developer must be.

It follows, therefore, that a great deal of modification is possible as regards the hardness or softness of result obtainable. A naturally hard negative requires longer exposure for the same color than a softer one. That is to say, if two negatives of about the same density, but one hard and the other soft, are both given the same exposure and developed the same color, the hard negative will give a hard print and the soft negative a soft print. On the other hand, if the hard negative is exposed longer, the print might be taken out when it had arrived at the same color, and would then be softer, and *vice versâ*.

Clearing Prints. It will occasionally be found that gaslight papers, particularly the glossy varieties, show, when finished, certain streaks and marks, which look very much like pencil scratches. These are due to abrasion of the surface, and whilst it is not quite clear why they should arise—for bromide prints are certainly not so prone to them—they can in almost all cases be removed by rubbing them with a pledget of cotton wool wetted with alcohol. If this fails to remove them, then they should be gently rubbed with the following:

Thiocarbamide	5 grains.
Nitric acid	5 minims.
Wood alcohol	½ ounce.
Water	½ ounce.

Care must be taken, however, when using this, as it is a fairly energetic reducer. The best way is to lay the print face up on a sheet of glass, then to gently rub the spots or marks with a bit of cotton wool damped with the above solution, and immediately to plunge under a stream of water, continuing the rubbing and alternately washing and applying the solution until the marks disappear. This solution will also remove developer or fixation stains.

After-treatment of Gaslight Prints. Gaslight prints after development and fixing are washed and dried in the same manner as bromide prints. They can then be toned in any of the toning baths recommended for bromides, and, in fact, can be treated in exactly the same manner for all after processes.

"Gaslight" postcards are treated in exactly the same way as gaslight papers.

To summarise, keep dishes, measures, and hands perfectly clean, and avoid hypo contamination, or stains will occur. Expose correctly and develop quickly. Prints should be fixed for at least ten minutes. Use small quantities of developer and renew it frequently. Blisters are usually produced by the fixing bath being too strong. Printing nearer the light reduces contrast and shortens the exposure. Greenish tones are a sign of too much potassium bromide in the developer. If the whites of the print appear fogged, there is not sufficient bromide in the developer. If correctly exposed, a gaslight print should attain full density in five to ten seconds. The developer should not be used repeatedly. It is liable to stain the paper after much usage. Yellow high lights are caused by

too weak or exhausted developer, under-exposures, or too long development. Pure whites, proper color in the shadows, and all the details in the picture, can never be got if development has to be forced. A full exposure and a very brief development with a strong developer give the longest scale of gradation with the most satisfactory color. Stains during fixation are caused by allowing the prints to lie one over the other, particularly when not freed from all traces of developer. Development is more under control if the print is thoroughly wetted first. Printing further from the light increases contrast and lengthens the exposure. Most bromide paper developers used double strength are suitable for gaslight papers. Use slow gaslight paper for thin, flat negatives: a more rapid brand for harsh negatives. The addition of a spoonful of white granulated sugar to each ounce of developer slows the action sufficiently to develop easily with a brush.

Finally, don't try to work gaslight papers in hot weather without cool baths, for nothing stains a print quicker than a too warm developer. Don't blame the paper if it will not work to your satisfaction. It is an excellently made product, and in ninety-nine cases out of a hundred the fault lies in some of the manipulations, not in the paper itself. Look for faults at home.—*Year Book of Photography.*

BOOKS RECEIVED.

PENROSE PICTORIAL ANNUAL AND PROCESS YEAR-BOOK, 1906-7. Edited by WILLIAM GAMBLE. Published by A. W. Penrose & Co., London. Price, $2.50. Tennant & Ward, New York, American Sales Agents.

This magnificent volume, so well known for its wonderful display of illustrations by every known method of reproduction, exceeds in interest and beauty any of its predecessors. Primarily a book for the process engraver, this year's volume is specially interesting to the photographer, containing articles on "Artistic lenses," "Collotype in relation to picture post-card work," "Photography and the stage," "Color photography," "Photographic post-cards, etc." Its fifty-six full-page color plates and some hundred and fifty full-page half-tone illustrations easily make it the most interesting book we know for the reception-room table. There are pictures to interest and please every taste and age. Of special interest is a portrait from life in three colors, an example of the color work that is being done commercially in Berlin and London. We strongly recommend this wonderful book to the photographer.

THE COMPLETE PHOTOGRAPHER. By R. CHILD BAYLEY. 397 pages and index; 100 illustrations. Cloth. Price $2.50. New York: McClure, Phillips & Co.

A popular treatise on photography, in which the author steers a middle course between the scientific treatise for the student and the elaborated instruction book for the beginner. Beginning with a chapter devoted to the history of photography, the following chapters give a systematic and thorough course of instruction. Amongst others, there are chapters devoted to apparatus, the lens, the dark-room; exposure, development and after-treatment of the negative; carbon, platinum and bromide printing; orthochromatic and three-color photography; portraiture; pictorial photography, including an account of its present position in this country. The last chapter in the book, on photography and the printing press, should be especially interesting to the professional

photographer. It describes the method of obtaining photogravures, halftone engraving, Woodburytypes and collotypes.

The full-page illustrations, some sixty in number, are reproduced from photographs by the leading pictorialists, among whom are: Craig Annan, H. W. Bennett, E. T. Holding, Percy Lewis, A. L. Coburn, Alfred Stieglitz, Steichen, Clarence White, Will and Carine Cadby, F. H. Evans, David Blout, Mrs. Kasebier, Mrs. Cameron, Major Puyo and R. Demachy.

The frontispiece is a photogravure of William Crooke's celebrated portrait of Henry Irving. The chapter on pictorial photography fails to mention Mr. Horsley Hinton and his work and to that extent is incomplete. The *Complete Photographer*, while containing nothing startlingly original, is a distinct addition to the literature on the subject and should find its way into every photographers' library.

From the Eastman Kodak Co. we have received copies of *The Velox Book*, *Kodak Home Portraiture*, and *Bromide Enlarging with a Kodak*. Though written for the amateur photographer, and with a view to increasing the sale of Eastman products, these little volumes are extremely useful and up-to-date instruction books and should be found in every workroom. They contain much useful imformation and many good pointers. Copies free at Kodak dealers.

SELF-PROPELLED VEHICLES. A Practical Treatise on All Forms of Automobiles. By JAMES E. HOMANS, A.M. Fifth revised edition, entirely rewritten. New York: Theo. Audel & Co., 63 Fifth Avenue, 1907. Price, $2.00.

New and completely revised, this popular book fulfils the requirements of the motor-vehicle owner, operator and repairer. All the accessory parts of an automobile, carburetters, igniters, transmission gears, are fully explained by typical examples. The author properly assumes that an adequate knowledge of the principles upon which these devises are constructed will enable the reader to understand variations for himself. Photographers who are fortunable enough to possess an automobile will find the book more than interesting.

SAN FRANCISCO RELIEF FUND.

REPORT OF THE RELIEF COMMITTEE OF THE PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA.—This committee was appointed by members of the regular Photographers' Association of California, for the purpose of receiving money and contributions of any kind from any persons or associations for the benefit of such photographers of San Francisco, and State of California generally, who lost their all, place of business, or had otherwise suffered, by the great disaster of April 18, 1906, and the terrible fire which followed and lasted three days and totally destroyed the beautiful City of San Francisco, and also many other cities throughout the State of California, that also suffered more or less terribly by earthquake and fire, about the same time.

The Relief Committee of the Photographers' Association of California consisted of the following active members: O. H. Boye, *Chairman;* P. H. Wilton, I. W. Taber, Jacob Frawzer, Geo. Knight, O. V. Lange, E. J. McCullagh, *Secretary;* Paul Lotz, *Treasurer*.

Mr. Dave Mullender deserves credit for having taken an active part in the relief work at the start, but had to give it up on account of taking a position out of the city.

Special credit is due Mr. O. H. Boye, the Chairman of the Relief Committee, for the prompt and businesslike way in which the relief work was attended to, receiving the different amounts so kindly donated by our Eastern and other friends amongst the photographers, and then distributing some funds to those who were most justly deserving, and at the same time do the most good with the amount of money at the disposal of the Committee.

Mr. Boye and other members of the Committee devoted much of their time, and also other expense for clerical work, etc., for the benefit of the relief work, without any compensation or reward, for which they deserve much credit.

Much credit is due to the sympathy, energy, and enterprise of the officers and members of the Metropolitan Section of the Professional Photog-

raphers' Society of New York, who within forty-eight hours after the disaster had formed a relief which subscribed $500.00 and was the beginning of the general relief fund for the benefit of California photographers.

The various photographers' associations and the manufacturers of photographic supplies all deserve much credit for the result of the work they have accomplished, and also their own liberal contributions.

Among others of our well known Eastern photographers to whom much credit is due for active relief are: B. J. Falk, *Chairman;* Jos. Byron, *Treasurer;* Pirie MacDonald, and other members of New York committees; Dudley Hoyt and others of Western section P. P. S. of N. Y. W. H. Partridge, *Chairman;* F. R. Barrows, *Treasurer;* Will Armstrong of the Lens and Brush Club, and other members of committees of Boston, Mass., Photographers of Milwaukee, Wis., Philadelphia, Penna., St. Louis, Mo., and a few photographers of California, and also a nice little contribution as a result of the kindly interest of Pirie MacDonald of New York, and the generosity of Mr. Edmond Vollois, *President*, and members of the Chambre Syndicate de la Photographic, Paris, France.

Among the manufacturers who have contributed liberally in way of photographic materials, apparatus, etc., to assist such of the California photographers who had suffered in the great disaster to start in business again, are: The Eastman Kodak Co., G. Cramer Dry Plate Co., Bausch and Lomb Optical Co., Willis and Clements, The Goerz Lens Co., and others.

The firm of Hirsch & Kaiser deserve much credit for the use of their store for the committee's use and assistance in various other ways.

If there are any others to whom credit is due whose names may not be mentioned in this report, they can feel assured that it was not intentional on the part of the writer, not to appreciate their services. They can also feel assured that their interest in the welfare of the California photographers was fully appreciated just the same.

The following is the result of contributions from all sources, making the total amount of money received nearly three thousand dollars, most of which was donated by the Photographers of New York City and State of New York, and Boston and State of Massachusetts. Adding the value of the contributions from the manufacturers of photographic supplies, which consisted of photographic material, apparatus, etc., making a total value of all contributions a little over five thousand dollars, which was duly received and distributed by the relief committee of the Photographers' Association of California, all of which was very much appreciated by the relief committee and the photographers of California generally, and did much good when most needed.

THE RELIEF COMMITTEE,
PHOTOGRAPHERS' ASSOCIATION OF CALIFORNIA,
PAUL LOTZ, Treasurer.

TRADE NOTES

DRY MOUNTING TISSUE.—Have you tried the Kodak Dry Mounting Tissue yet? It is, we believe, the simplest and most satisfactory method of mounting yet devised for the professional photographer. It has very many advantages over the paste-pot and brush method; cleanliness, speediness, noncurling even on the thinnest mounts, and you do not have to lift the corner of your print to remove a "brick." The process of mounting is simplicity itself. A sheet of tissue the right size placed in proper position under the print and pressed for a few seconds with a hot flatiron and your print comes out flat and in perfect contact.

THE PEERLESS MAGAZINE FLASH-LAMP.—A new lamp for pure magnesium, only just introduced by Geo. Murphy, Inc., New York, is a simple arrangement that can be carried in the pocket. It is said to be non-explosive and absolutely safe, giving fifteen instantaneous flashes, or less of longer duration, and has a screw attachment for fastening to a tripod. It retails at $3.00 and is guaranteed to give satisfaction.

THE NEW YORK STUDIO OUTFIT, perhaps one of the best-known products of the Anthony & Scovill Co., has an international reputation as one of the most complete and least expensive equipments on the market. The most perfect work can be produced with the least waste of time and the sitter does not become impatient when waiting with the expression at its best. Photographers about to invest in a new camera outfit will do well to give this camera careful consideration.

ANGELO PLATINUM PAPERS.—The new Angelo black-and-white platinum papers, recently introduced, have all the good qualities of the celebrated Angelo sepia, which is saying a great deal, and are sure to become as popular. The Angelo papers, so long known for their reliability and uniformity, under the new and improved conditions of manufacture promise to excel their past record. One of the good points of Angelo sepia platinum is the cold development bath which, not being instantaneous, gives much more control in manipulation.

AUTOTYPE CARBON FILM BORDER NEGATIVES are the latest novelty in carbon printing. This is a series of designed negative borders for adding artistic designed effects to photographic portraits. The films are furnished with opaque masks and films, enabling double printing to be carried on with facility. They cost one dollar, and add considerably to the effectiveness of carbon prints. There are eight designs to select from. Sold by Geo. Murphy, Inc., New York.

HAMMER PLATES.—"Extra Fast" and "Special Extra Fast" are brands especially useful at this season of the year. A perfect negative saves cost in retouching and printing and eliminates resittings. It is claimed that the Hammer plates give perfect negatives where other plates frequently fall down. Hammer's "Little Book" tells how they are made. It's free for the asking and full of useful information. Write to the HAMMER DRY PLATE CO., St. Louis, Mo., for a copy.

TANK DEVELOPMENT of plates is very rapidly coming to the front, and the indicatons are that this method of development will soon become general. Several of our leading manufacturers are helping the boom along by placing on the market different forms of practical and workmanlike developing tanks. The Ingento Automatic Developing Tank for plates is a thoroughly dependable tank for the everyday use of the professional photographer. For clean, clear, uniform negatives the tank is almost a necessity; it is also a great saver of time. Ask your dealer to show you one of these tanks, or write Burke and James, Chicago, for descriptive circular and particulars.

EDITOR'S TABLE.

WHICH IS IT? Writing under the heading of "The A. P. Causerie" in *The Amateur Photographer* (London) of January 1, "The Magpie" remarks: "Is it not common knowledge that American photographic publications are mainly built up of articles stolen from the British technicals?" Truly a terrible charge, but fortunately every poison has its antidote. In *Focus* (London) of the same date we read: "Compare the quantity of original matter appearing in *Focus* with the quantity of second-hand stuff appearing in the pages of our contemporaries *hashed up by the yard from the American photographic journals.*" *Focus* confirms the *Standard Dictionary*, which describes the magpie as a garrulous bird, noted for its thievishness.

We congratulate LAPRES and LAVERGNE, of Montreal, on the good showing they make with their child studies in the Christmas number of *Le Samedi*, an illustrated French Canadian weekly. The studies are of children sleighing and snowballing, and make timely and interesting pictures and are the sort that will sell readily to the magazine publishers.

NEBRASKA PHOTOGRAPHERS' ASSOCIATION.—The eighteenth annual convention will be held at Lincoln, Neb., May 22, 23 and 24. Speakers of national repute are expected to address the meetings. A good prize-list is offered and the officers are making every effort to make the 1907 meeting the best the association has ever held. Nebraskan photographers are urged to begin on their exhibits.

AMERICAN PHOTOGRAPHY IN LONDON.—There are at present two collections of American photographic work on exhibition in the British metropolis. Messrs. J. H. Dallmeyer, Limited, are showing a collection of portraits at their showrooms at 25 Newman Street. *The British Journal of Photography* is holding at its offices an exhibition of portraits by American professional photographers, January 14 to February 23.

THE PROPOSED PHOTOGRAPHIC EXHIBITION AT DRESDEN.—A preliminary meeting to discuss the arrangements for this international exhibition was held at Dresden. After considerable discussion it was decided that the year 1909 would be preferable to 1910 for the holding of the exhibition. The opinion was expressed that no means should be omitted to make the exhibition fully representative of photography in all lands, and that to this end the separate departments of photographic industry, science, and art as practised in various countries should be included in the scheme of the exhibition. It is proposed to issue invitations in reference to the exhibition early in 1907.

WE regret to announce the death of Mr. Thomas R. Dallmeyer, which took place on Christmas Day after a few days' illness. No name in the photographic field was so well known as that of Thomas R. Dallmeyer. Born in 1859, he graduated from Kings College, London, with a B.Sc. degree, having devoted the greater part of his studies to mathematics. He then took a practical course of lens grinding and optical brass working in his father's factory. During his career Mr. Dallmeyer designed many new and valuable optical instruments. His name, however, will be remembered longest in connection with the telephoto lens, he having made the first practical telephoto lens in 1891 and which he has since considerably improved. Mr. Dallmeyer was an active member of the Royal Photographic Society and its President in 1900. His loss will be felt not only by the photographic world, but also in a wide literary and artistic circle in which he was a familiar figure.

THE BAUSCH AND LOMB OPTICAL CO., of Rochester, have just issued an attractively gotten up booklet on "Home Portraiture," especially as made by the Bausch and Lomb Zeiss-Tessar. Any means that will help the professional photographer to get "home portraiture" effects is to be sought after. The little brochure in question contains some interesting illustrations, and many useful pointers on lighting and posing in the home. Bausch and Lomb, or any of their agents, will be glad to supply a copy free.

FORBES ROBERTSON AS "HAMLET"

By Gilbert and Bacon, Philadelphia, Pa.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV MARCH, 1907 No. 603

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

REPORT OF THE EXECUTIVE MEETING.

The Executive Committee of the Photographers' Association of America met in executive session at the Beckel Hotel, Dayton, Ohio, January 22, 1907, to arrange for the twenty-seventh Annual Convention—all officers present. C. J. Van Deventer, President; C. L. Lewis, First Vice-President; A. T. Proctor, Second Vice-President; F. R. Barrows, Treasurer; Frank W. Medlar, Secretary.

Report of Secretary, as follows:

Received on old accounts	$24.50
Received for floor space, 1906	1830.00
Received for desk space, 1906	223.00
Received for advertising, 1906	691.00
Received for all other privileges, 1906	32.00
	$2800.50
Paid to Treasurer	2800.50
Outstanding accounts	52.50

FRANK W. MEDLAR,
Secretary.

Treasurer's Report.

Cash on hand January 1, 1906	$4818.54
Received from Secretary, 1906	2800.50
Received from memberships and dues	2463.00
Sale of ladies' pins	47.25
	$10,129.29
Paid out on Vouchers No. 583 to 660	5757.55
Balance on hand January 1, 1907	$4371.74

President Van Deventer appointed C. L. Lewis and A. T. Proctor to audit accounts of Secretary and Treasurer, which were found correct and approved.

It was decided that the twenty-seventh Annual Convention of the Photographers' Association of America be held August 6, 7, 8, and 9, in the Steele Educational Building, Dayton, Ohio.

From the numerous letters received the consensus of opinion was not in favor of prizes, which guided the Board in their decision to offer no prizes the coming year. However, these opinions were not averse to recognizing merit in any other way than by giving prizes of intrinsic value.

The unusual interest manifested in the last Salon Exhibit, has led the Board to continue this feature at the Dayton Convention; but, it is to be understood that the twenty-five pictures so selected are not to be rated—all honors to rest equally on pictures so selected. A certificate of award will be given to all receiving Salon honors.

In compliance with a resolution passed at the Niagara Falls Convention, the Association this year offers one hundred dollars in gold to be awarded to the

manufacturer or dealer exhibiting the best invention, appliance, formula, or process, not heretofore shown at a national convention; and, in addition thereto, will give fifty dollars in gold to the *inventor* of such, as the case may be, provided he be other than the party exhibiting same.

It was decided that two hundred dollars be placed at the disposal of the Entertainment Committee, to carry out plans maturing for the entertainment of members.

The Board ordered that official ballot-slips be used in the election of officers, and that no other than this official ballot be recognized.

Rules and Regulations.

1. Exhibits may be framed or unframed, at the discretion of the exhibitor.

2. Exhibits shall consist of two classes —Salon or complimentary.

3. The Salon class shall consist of salable portraits. The exhibitor shall be prepared to affirm that his negatives were *made for a patron and prints sold from same.*

4. The exhibit shall consist of not less than three nor more than six pictures, only one of which may be selected for Salon honors.

5. In the complimentary class, exhibitors are requested that their exhibits shall not exceed twelve prints. No other restrictions.

6. Application for space in the Art Department shall be made to C. L. Lewis, 1217 Madison Avenue, Toledo, Ohio, First Vice-President, Photographers' Association of America.

7. Any exhibits not received by August 1, or on which all charges are *not prepaid, will not be accepted.*

8. The Association will not be responsible for any loss or damage to pictures while in its charge, but special precaution will be made to assure the safe return of all exhibits intrusted to its care.

9. No exhibits shall be removed from the hall until after the close of the Convention.

10. To become a member of this Association, one is required to pay to the Treasurer $5. $3 of this sum is the membership fee, and $2 dues for current year. To retain one's membership the annual dues of $2 must be paid yearly.

11. Employees are required to only pay the dues of $2 to become members of the Association, but must bear a letter of endorsement from their employer, or be identified by two active members of the Association.

12. All charges must be prepaid and all exhibits *must be* in place on the morning of August 6, 1907.

13. Manufacturers and dealers, in renting desk space, are to understand that this constitutes their only privilege, and whenever extra tables or surrounding floor-space is used for the display of their goods they will be required to pay for floor instead of desk space.

14. All manufacturers, dealers, or their representatives, attending the Convention will be required to pay the associate membership fee of $2.

Committees.

Hotels and Accommodations. A. T Proctor and Frank W. Medlar.

Entertainment. A. L. Bowersox, Chairman; J. M. Appleton, C. L. Lewis, J. Zweifel, F. R. Barrows, and A. Grossman.

Decoration and Hall. C. L. Lewis, A. T. Proctor, and Frank W. Medlar.

Ladies' Entertainment. Mrs. A. L. Bowersox, Mrs. C. J. Van Deventer, Mrs. J. Zweifel, Mrs. F. R. Barrows, and Mrs. C. L. Lewis.

Membership Buttons. F. R. Barrows and A. T. Proctor.

Press. Frank W. Medlar, C. L. Lewis, and A. T. Proctor.

Transportation. F. R. Barrows, C. L. Lewis, and A. T. Proctor.

Printing and Advertising. F. R. Barrows, Frank W. Medlar, and C. L. Lewis.

Association Review. F. R. Barrows, A. T. Proctor, and C. L. Lewis.

Information. F. R. Barrows and Frank W. Medlar.

Local Press. A. L. Bowersox.

FRANK W. MEDLAR,
Secretary.

BURR McINTOSH, PHOTOGRAPHER OF FADS AND FANCIES.

BY SIDNEY ALLAN.

How to classify him! A photographer who is no specialist (in the ordinary sense of the word) and yet who can give most specialists a beating at their own game must be a remarkable sort of camera craftsman.

I, who am not easily abashed, stand perplexed before this virile and versatile personality. The usual terms do not apply to him. He occupies a unique position in the photographic field, and I find it difficult to make up my mind from what side I might best approach him.

He is generally called a society photographer. This is true to a certain extent. Burr McIntosh is, at all times, at the service of polite society, but in a somewhat different fashion than the rest. The average "society" photographer sits in his studio, sends out a general invitation to fashionable people, and waits until they come or do not come to him. Burr McIntosh, on the other hand, actually goes into society; he has the entrée into political and military circles and various coteries of our fashionable world, and while enjoying himself in their very midst plies his tools of trade nonchalantly like a gentleman-amateur. Only the results, photographically as well as financially, are strictly professional in character.

To understand more clearly his peculiar vocation, it may be interesting to dwell, for a few moments, upon his earlier life before he became a photographer. As a college student he was greatly interested in athletics and, I believe, made quite a hit as a baseball player. After leaving college he followed the theatrical profession for fifteen years, and not earlier than ten or twelve years ago did he take up photography as a profession.

And how well he understood to adapt his new vocation to the wants of his own personality! It furnishes an object lessen to every man in the profession. The temperament of the strolling player, something lusty, restless, and unabashed, was still in him and it has never entirely left him to this very day. He is a nomad by nature. Change is absolutely necessary to him. He can not occupy himself with anything for any length of time. He went his own way, always splendidly and aggressively himself; one of the few men who have fashioned out of photography a resonant instrument capable of expressing the virile and individual emotions of his own life. This is to me Burr McIntosh's chief distinction.

But what of his workmanship? It is O. K. of course; I have said so at the very start. Should one wish to be critical one might say that his prints are generally a trifle too hard or too light. Well, these faults are not of a very serious nature.

By choice, he is largely a recorder of facts, and distinctness and clearness are

not always possible without hardness in the outlines and the transition of light to shadows. Whether a print is too light or not is really a matter of taste; some people like it, and his portraits on that order had, for a time, quite a vogue. His prints, however, do not interest me as specimens of workmanship. Workmanship I study at Strauss' studio, or at Falk's, or at Steffens' or Stein's. The subject matter attracts all my attention. It is poured forth in an endless stream. It is like a society encyclopædia in pictures. The range of subjects is simply astounding. I believe Burr McIntosh has photographed everything under the sun.

Rummage about in his studio and you will get a vague idea of this man's prodigality. There is Ethel Barrymore in her prime, a vaguely colored enlargement, as handsome a "professional" picture as I have ever seen. Right near it stands a picture of the Sultan of Sulu on horseback accompanied by two runners. Not far away from it I espy a camp scene of the Spanish-American War, with Colonel Roosevelt, General Wheeler, and several other military notables as leading figures; and within the grasp of my hand, for a change, lies the portrait of the pet dog of some languid lady of fashion. Everywhere prints galore: of children in smart frocks and coats; of frequenters of clubs; of society débutantes in delicate fluffy gowns; of tally-ho parties; of picnic and garden scenes; of an equestrienne taking a hurdle on her favorite hunter; of yachts and automobiles, etc. There seems to be no end to his energy.

But this kind of photography is really only a side issue with him. It occupies very little of his time, for he is generally away on some trip, on some photographic exploitation. Some lumber king of the West wants to give the world an impression of the vastness of his possessions, of his yards and forest land. Burr McIntosh is at his disposal. A railroad company desires the beauty of some mountain scenery depicted for advertising purposes. Burr McIntosh will start to-night for the spot. As panoramic views are most suitable for this kind of work, McIntosh has made quite a study of this sort of kodaking. I have seen several of these views, some of them forming a complete circle; a lumber yard and a baseball field (taken from the centre) which were exceedingly well handled, without a blur or break, clear in every part and perfect as regard to detail. Of course a man like McIntosh has no distinct method. I asked him whether he had one. He answered in a vague way: "One has to reckon with the conditions, the light, the weather, and atmosphere."

But before I forget, I must point out to you McIntosh's principal claim to photographic honors. He is in a way the special photographer to his Excellency, the President of the United States, Theodore Roosevelt. It is not an official position, he would be the last to take one, but he simply has leave of way whenever something of importance happens in the solemn affairs of state. Thus he accompanied the Rough Riders as war photographer on their Cuba campaign, and was the only member of his clan who succeeded in snapshotting several phases of the famous charge on San Juan Hill. And thus he went with the Taft party to the Orient, chronicling the scenes and incidents of that memorable semi-diplomatic journey. The number of pictures he made during this trip goes into the thousands, and to the initiated they are very much like illustrations to some "Alice in Wonderland." We see her slender girlish form, *en famille* so to speak, in attitudes and poses unknown to the public, with the beauties of the Orient. Perchance, the Temple of Shiba or some Chinese gateway as a fitting background.

Yes, Burr McIntosh knows how to get some enjoyment out of his profession. I never wished that I were a photographer, but if I had to be one I would rather change places with him than with anyone else. He is alive, masculine, vital, and in his work he has made his own personality live; and that is more than art, it is the art of life which few of us manage to introduce in our every-day business life.

The life of most photographers is hodden-gray. Always the same thing, going to the shop in the morning and going home in the evening. The same wearisome promenades from the reception-room to the operating-room and back again; the same experiences under the skylight. This man knows how at least to give his life an interesting twist. He goes to the big athletic games and takes part in the Meadow Brook hunt. But does this diversified occupation really add to the prosperity of his business? Well, this is not for me to answer. That is every man's own affair. I only know that he is "a hale fellow well met," who understands the art of spending money.

He has great capacity for work. He has always several "irons in the fire."

He is afraid of nothing, and we can expect everything from him. Attending to the ordinary routine of his business, and furnishing all the material for the Burr McIntosh magazine every month, he still finds time to lecture on his trip to the Orient, and to work on the libretto of a musical comedy, entitled "The Photographer," which will be produced by some New York manager early in spring. In the meanwhile he will proceed to Los Angeles, where he dreams of opening a gorgeous studio in the Mission style, of vast dimensions—the largest and most beautiful studio in America, surrounded by acres of ground. In the winter, for a few months, he will conduct his business in New York as heretofore; but, the remainder of the year he will live in some summer clime, among the fairy-like surroundings of his own creation, which can not fail to give to his personality the proper setting which it should have enjoyed long ago. Let us hope, for his sake, that this dream will come true.

Burr McIntosh has travelled on many highways, but he has always remained master of himself. He has exploited the fads and fancies of society, but in a way that has lifted the profession one peg higher in the esteem of the world. Photography is to him a sport, useful, pleasing, and lucrative at times, specially made for a man of roving disposition as he is, and the least we can do is to admire his versatility. He may have never produced a single photograph that is perfect, artistically speaking—who does? But I am sure that he has produced more photographs that will live than the majority of photographers I know.

THE PHOTOGRAPH IN BUSINESS.

BY R. E. KING.

SPEAKING to a friend, who is a large importer of embroidered and drawn-work linens, the other day, I casually mentioned that I thought the sending of expensive samples by his correspondents abroad would cost him a great deal, considering that there were quite a few lines that he could not use, as, of course, he was charged with the value of samples and other costs necessary to put them before him. "Oh, no," he replied, "because we do not have samples sent to

us until the design is approved," and here he reached behind his desk and drew out a book, opened it, and there on little loose cards, so as to preserve their numerical order, were pasted photographs of every class of embroidery work that had been submitted to him. Below the photo, carefully listed in order, were the names of the firms sending the photo, maker of the goods, price, duty, and net landed cost. There was a place for selling price also, which was entered, of course, in code.

Every photo was listed and full data entered, even though no order was placed for the material.

Continuing, he said, that it had proven of value, being a permanent record of all lines, even though some were obsolete, etc., that there was no necessity of having the desk littered with samples, as the book would show the design, etc., and cost. "Of course," he went on, "the quality of the goods can only be determined by an actual sample, which I always call for before placing an order, choosing such a design from the photograph scrapbook as I think desirable."

After leaving him I thought that, although to a great extent the practice is followed in the machinery trade and other kindred lines, it could be used more generally than it is, especially where it is not feasible or desirable to send a catalogue. It brings to my mind a little experience of my own, which happened last spring. During that time, last April, I believe it was, I wished to purchase a small gasoline boat, and, of course, entered into correspondence with several firms manufacturing boats of that kind. In the course of a few days catalogues and form letters began to materialize, lauding the particular make of boats the firm manufactured, but there was nothing to show what the boat would look like except the small cut in the catalogue.

One of the best letters I received, and from writer of which I eventually bought the boat, had enclosed a small unmounted photograph, nicely finished, of the boat. Somehow it looked to me better than a cut in the catalogue; it showed, at least, that it was not a drawing of a pretty boat drawn by an artist, and, although it was a small thing, it was, at least in this particular instance, a winning point.

The cost must have been small, as the print was enclosed in a little rice-paper envelope with a courteous request to return when through with it, printed on the outside. In the majority of cases this is done and the same print may do duty many times before it is worn out. It certainly seems to me that the photograph could be used to greater effect than it is at the present time in the commercial field.—*Moore's Messenger.*

MAKING ENLARGEMENTS ON TEXTILE FABRICS.

BY A. J. JARMAN.

ONE of the branches of photography that is capable of yielding a profitable income, and forming a permanent section of the business, is the making of enlargements upon various kinds of fabrics for the making of cushion-tops, screens, and many other purposes. To print a photograph direct upon either silk, sateen, or linen, can be readily done with either the salts of silver and iron, or by a prepared surface that has been sensitized and dried.

To make an enlargement a different method of procedure must be adopted. The surface of the article is made much more sensitive than in the printing-out

process, and resort made to developing the image in a similar way to bromide paper enlargements. Not only can cushion-tops be made by the process about to be described, but much larger work can be produced of the character of tapestry, which can be worked in with colored yarn or allowed to remain as a production in monochrome. The fact that these productions can be washed with soap and water, and ironed in just the same way that any laundered articles can be, without fear of injury, should cause them to be brought very largely into use for many decorative purposes and realize prices that no kind of paper enlargement can command.

The utensils for carrying on the work need only be a few extra-large trays: one for salting the fabric; another to contain the nitrate of silver bath for sensitizing, one for developing, and a fourth for fixing the prints in. The washing after fixation can be carried out in a wooden wash-tub (a metal washing tub must never be used).

The cushion-top, which may be of silk, sateen, or, if canvas is used, the latter is ordinary shirting, which must be washed well in clean hot water until all stiffening material has been washed out, then rinsed well in cold water and dried. Silk or sateen can be treated the same, using no alkali whatever. When the fabric is dry it will be ready for the salting bath, which is made up as follows:

Salting Solution.

Bromide of ammonium	3 ounces.
Iodide of ammonium	1 ounce.
Bromide of cadmium	1 ounce.
Distilled water	240 ounces.

The canvas or linen is dipped into this and then drawn over a glass rod at the end of the tray, so as to drain off the excess of liquid which returns to the tray. The fabric is then hung up by shellac-varnished clips to dry, being stretched out as flat as possible during the drying. A number of pieces can be prepared in this manner and kept ready for use.

The next operation will be the sensitizing which is carried out in the following way: The solution must be made up and filtered. The tray in which this solution is used must be kept for the purpose of sensitizing only, care being needed in the use of this solution, and cleanliness, to ensure success.

Sensitizing Bath.

Nitrate of silver	5 ounces.
Citric acid	1 ounce.
Distilled water	140 ounces.

The salted material is dipped into this solution and allowed to remain for about two minutes, when it is removed and drawn over a glass rod or tube at the end of the tray, in just the same way as the previous salting. The sensitized sheet is now hung up for a short time in a dark room when it will be ready for exposure. It must be understood that the sensitizing operation must be carried out under a non-actinic light, the material being in a very sensitive condition. In the course of a few minutes it will be ready for exposure.

This sensitized material can be exposed either wet or dry. It is in a much higher sensitive condition when wet than when dry. The enlarging is carried out in just the same manner as making a bromide enlargement upon paper, either by the use of an electric arc light with a suitable condenser, or by daylight without a condenser.

The image is focused upon a sliding screen; the board against which the damp sensitized canvas is fixed must be well coated with a protective varnish such as shellac, or a sheet of glass can be inserted and the edges of the board well varnished, the cloth being held in position by pins of hard silver wire. If the sensitized canvas is used dry, it can then be fixed in position with sharp-pointed awls, or a device for clipping can

be resorted to. As soon as the canvas or cloth is in position the exposure is made. This will vary according to the intensity of the light, and may require from two to ten minutes. As soon as the exposure is complete the canvas is removed and placed at once in a tray for development, the developer being poured rapidly over the surface in one wave. The developing solution is made up as follows:

Pyrogallic acid	1 ounce.
Citric acid	1 ounce.
Distilled water	60 ounces.

Pyrol may be used in place of pyrogallic acid.

As soon as development is complete, which will occur in the course of from five to eight minutes, according to temperature, the canvas must be removed and plunged into a tub or tray of clean water, at the same time allowing no actinic light whatever to strike the enlargement. It must now be kneaded and washed in just the same way as washing a piece of linen, changing the water several times.

After this the print must be toned. Any of the usual gold-toning solutions can be used, such as are used for separate toning. When the toning is complete, another good washing will be required, after which the print must be fixed in a solution of hyposulphite of soda. The toning will change the color of the print considerably, and any red color that existed will disappear.

The hyposulphite of soda may be as strong as 25 or 30 on the hydrometer; about ten minutes' fixing will be required, the hyposulphite solution easily penetrating the fabric. As soon as the fixing is complete, the article must be thoroughly washed in a half dozen changes of water or more, and it will be better if half an hour washing in running water is given in addition. If the article is silk, the excess of water can be wrung out of it, and ironed from the back, the print either lying down upon a sheet of clean paper or resort may be had to the ironing board of the laundress.

The operation may appear to be somewhat tedious, but in practice it will not be found to be so.

If the arc light is used for the purpose more than one enlargement can be made at the same time. All that is necessary will be to fit up two or more suitable sets of rails and focusing screens or boards. The arc light should be fitted in an adjoining room or in a passage where it can be easily attended to, and as many condensers fitted around the lamp as may be required, each condenser having its own camera with lots of kits to take the various size negatives, and in this way no one set will interfere with the other, and the arc light can be made to do duty for two or three enlargements at the same time.

When an enlargement is made by this method a fairly defined outline of the image can be seen before development, and if the sensitized material has been dried previous to exposure a very decided outline of the image is visible.

Should the fabric be dried before exposure, it will be necessary to wet it in the nitrate of silver bath before development, allowing the excess of solution to run back into the tray by drawing the fabric over a glass rod or tube in just the same way as when the sensitizing is done. In some instances these canvas enlargements will bear being permeated with wax and well ironed with a hot flat-iron.

The developer will become discolored during a single operation and cannot be used twice over. This used developer should not be thrown away, but saved in a barrel, and the silver thrown down as a sulphide by adding some sulphide of potassium to the barrel when nearly full. Collect from time to time and send to the refiner with other waste.

PAGES FROM A VETERAN'S NOTE-BOOK.

SOME ACCOUNT OF THE CAREER OF MR. J. F. COONLEY.

In the belief that "every man's experience ought to be worth something to the community from which he draws it, no matter what that experience may be so long as it was gleaned along the line of honest work," I am going to set down a few facts from my experience of almost half a century in photography. My object will be to condense as much as possible and to make my story as little tiresome as may be.

In 1856, while engaged in painting landscapes at Syracuse, N. Y., I became acquainted with the then leading photographer of that city, G. M. Barnard. At his request, I attempted coloring a photograph in oils. The success of it induced me to accept Mr. Barnard's offer of instruction in photography during my spare time. During the next few months I spent what time I could spare from painting under his skylight and learned the essentials of the business as known at that time.

Very shortly after, much to my surprise, I found it desirable to take up photography as a means of livelihood, the financial panic of 1857 sadly interfering with my work as a painter. I purchased a small gallery, which had been devoted to Daguerreotype work exclusively, and there introduced the "Ambrotype" or wet collodion picture, which was new at that time. The photographer in those days had to make his own gun cotton, collodion, etc., and prepare his own printing papers, so that a knowledge of chemistry was essential, and success by no means as easily won as it is today.

In 1858, Mr. Edward Anthony offered me a position as manager of his stereoscopic printing shop, the business of which he had just started in connection with his stock house at No. 308 Broadway, New York. I sold out my studio and spent two years as a stereoscopic printer, after which I was sent out to make stereoscopic negatives. While in Anthony's printing department I worked out a formula for albumenizing paper. The manufacture of this paper had become a special feature with the house of Messrs. Anthony & Co., and, as the paper gained in favor wherever used, a plant was erected for its preparation on a large scale. During those first years of albumen paper, the preparation of the albumen happened to be in charge of a man who, through ignorance or stupidity, placed a batch of it ready for the albumenizer in casks in which hyposulphite of soda had been shipped from Europe. As may be imagined, the paper treated with this tainted mixture quickly came back from customers from all directions, and there was "music in the air" around the store for some time. A careful search located the cause of the "poison," which so permeated the entire plant that as a last resort everything was destroyed and a new beginning was made. The setback thus given lasted long and created distrust and lack of confidence.

A short time previous to this incident the boy who silvered the paper for the printers accidentally broke a bottle of ammonia in the printing room filled with silvered sheets of albumen paper. He lost no time in getting out. When Mr. Kuhn (who had taken the contract to do the printing after I left) came in with Mr. Henry T. Anthony, he began in his excitement to tear down the stock of silvered paper and to throw it away. Mr. Anthony suggested trying a piece on a negative. This was done, and the

result was considered marvellous. Thus the fuming of albumen paper and its advantages were discovered—the result of an accident.

The first extensive excursion made for the purpose of securing stereoscopic negatives for Anthony & Co. was over the Pennsylvania Railroad and its branches in company with Col. T. B. Thorp, then editor of the New York *Spirit of the Times*. Our first journey was to Altoona, with passes over the road and letters to Mr. Enoch Lewis, the General Superintendent, with headquarters at that place. On our arrival at Altoona we presented our letters and explained the object of our visit. Mr. Lewis entered into the idea with enthusiasm and gave orders for a car to take himself and us over a part of the road in the vicinity of his city. On our return orders were given for special equipment of a photographic car for my use, and this with a crew of men was placed at my service as long as I desired it.

Col. Thorp and I travelled in this car over various parts of the road—to Delaware Water Gap and, later, to Pittsburg. There I presented a letter from Mr. Lewis to Mr. Andrew Carnegie, then Superintendent of the Western Division. He received me very cordially and placed every facility at my disposal. I recall with pleasure a viewing excursion made from Pittsburg on horseback in company with Mr. Carnegie and two others. Taking the horses as far as they could go, we divided the photographic outfit among four of us and made the ascent to a spot selected by Mr. Pitcairn where could be obtained a magnificent view of the Alleghanies. We got the view and returned to Altoona with sharp appetites for supper.

The carte-de-visite was beginning to be a popular size, especially for celebrities, and on my return to New York I was sent to Brady's Gallery, Tenth Street and Broadway, to copy in this size all his collection of distinguished people. This being completed, I was sent to his Washington gallery to do some work there. Before this was finished the War of the Rebellion broke out and soldiers were encamped in and about the Capital city. Many high officials in military and civil life were coming into town, and I remained in Washington to make pictures of them. After this I made pictures of the various camps and groups and everything else that came in the line of photography.

In 1862 I returned to New York, married, and left there for Philadelphia to open a portrait studio with a partner. Business not being satisfactory, I relinquished the studio to my partner after six months and returned to New York to take charge of Clark's Union Gallery, corner of Broadway and Bleecker Street, where I remained until 1864.

During this year I again visited Niagara Falls and made a series of stereoscopic negatives for Anthony & Co. Returning to New York, I was informed that a contract had been awarded me by the Quartermaster-General for photographic work along the lines of the railroads in possession of and used by the War Department, extending from Nashville to Chattanooga, Knoxville, Johnsonville, Tenn.; Atlanta, Ga., and Decatur and Huntsville, Ala. This work called for negatives 9 x 13 inches, and Messrs. Anthony & Co. contracted to take all the stereoscopic negatives I could make on the trip at five dollars each. On arriving at Nashville the military authorities had a box-car equipped for my work, and this, with an engine, was placed at my disposal with authority to go over the territory. The work had many interruptions, owing to the destruction of bridges or being chased by cavalry or similar causes. On returning to Nashville, just before the battle of that name, we had to run the gauntlet twice to escape capture by Hood's

cavalry. Arriving safely at Nashville we awaited the coming battle between Hood and Thomas. As soon as the battle was well under way I had an ambulance with drivers take me as near as possible to make negatives of everything in sight, two days being given to this work. Then the rain came and continued for several days, so that I left there several days after the retreat of Gen. Hood. . . .

In the following spring, after the capture of Savannah and the evacuation of Charleston, I sailed for the latter city on the first steamer leaving New York, arriving in time to make pictures of the raising of the Old Flag over Fort Sumter, on the spot where four years previous it had been lowered and saluted. The same flag was again raised by Gen. Robert Anderson. The surrender of Lee just before this event gave much importance to the ceremony, which was accompanied by speeches, music, and military display. The day was bright, there was a strong breeze blowing, and the harbor was gay with a great fleet of steamers and excursion boats, all decorated, with their flags standing straight out in the wind. The impressive sight and the great crowds of spectators will never be forgotten by those who were present. This was on the 14th of April. On that same night, in a Washington theatre, President Lincoln was laid low by the hand of an assassin. There being no telegraphic communication at that time between Washington and Charleston, it was two days before the news of Lincoln's death reached there by steamer.

I made thirty-one negatives of the Charleston celebration, all made with a drop shutter, after which I photographed the city and its ruins for the stereoscope, and then returned home for the final act in the drama that had taken four years to work out. Peace was declared, and I went to Washington to photograph the armies of the Union as they were mustered out of service. I will never forget that great pageant, as for two days a formidable host of hardy veterans marched through the nation's capital under the eyes of their commanders. The demonstration had many curious features which I pass over. The only negatives of this great historical event were made by the writer with the assistance of Mr. David Woodbury, the plates being exposed with a drop shutter, this being the nearest approach to an instantaneous exposure with a wet plate.

Returning to New York, in 1877, I went to Nassau, the capital city of the Bahama Islands, at the request of the Governor-General, Sir William Robinson. Returning to New York some time after, I took a position as operator for J. M. Mora, 707 Broadway, and spent five years with him, after which I again went to Nassau and established a permanent business there, which occupied me eight successive seasons from November to May or June.

During my residence in Nassau I made three trips to Cuba, securing many valuable negatives, which have since been largely used for the illustrations of books and sets of lantern slides for the Museum of Natural History, New York. The changes made in Cuba from a sanitary point of view between my first and last visits were wonderful and not easily realized except by actual experience, these changes being due to the administration of Col. Waring.

In the spring of 1904, I sold my business at Nassau to a native, who had learned the business in my employ, and returned to New York. Since that time I have made occasional visits to the Islands, and hope to make many more. As a winter resort there is no place on this earth where I would rather sojourn from November to June than the Bahama Islands.

So during these last three years I have lived the life of a gentleman of leisure, going where I pleased and returning when I got ready, with no one to say me nay. I have lived to see the advances made in all branches of photography since the beginning, and many things accomplished which were impossible during the early years. This progress has its disadvantages. As I foretold years ago, the time has come when almost everybody can make their own photographs, and, as a consequence, professional photography has become exceedingly difficult from a financial point of view. Where there was one gallery before the dry plate was established, there are now from twelve to twenty, and photographs, turned out in the hundreds of thousands, are as cheap as peanuts—and many of them dear at that.—*Snap Shots.*

THE CHEMISTRY OF THE SULPHIDE TONING PROCESS.

BY DOUGLAS CARNEGIE.

As a bleaching agent was used in these experiments a solution was made by dissolving nine grams each of ammonium bromide and potassium ferricyanide in 250 Cc. of water. This is practically the recipe given in the *Brit. Journ. Almanac.*

A bromide print immersed in this solution is bleached almost instantaneously. As is well known, a print will bleach in a solution of potassium ferricyanide alone, but the bleaching takes place so slowly that an immersion for several hours is necessary for its completion, and, it may be added, the tones obtained by sulphuretting prints thus bleached are, so far as my own tastes in matter of tones are concerned, quite impossible. As Eder showed some years ago, the reaction which takes place when metallic silver is brought into contact with potassium ferricyanide solution may be expressed by the equation—

$$Ag_4 + 4K_3FeCN_6 = Ag_4FeCN_6 + 3K_4FeCN_6$$

How is the extreme slowness with which a print bleaches in pure ferricyanide solution to be accounted for? May not the following observation furnish the clue to the answer? When potassium ferrocyanide solution is added to an excess of silver nitrate solution the precipitated silver ferrocyanide is flocculent, settles rapidly, and is easily washed in a filter or by decantation. But if the silver salt is not in excess the silver ferrocyanide is precipitated in a sticky, slimy form, which, on account of its coherence and impenetrability, it is next to impossible to wash in a filter even when using an efficient filter pump. Now in the bleaching of bromide prints we have silver ferrocyainde formed in the absence of any soluble silver at all, and presumably under these conditions the silver ferrocyanide takes the form of the slimy impenetrable modification just described. The formation on the surface of the silver image of a thin coating of this almost impervious variety of silver ferrocyanide would clearly prevent the rapid conversion of the underlying body of the silver image.

The question now presents itself why the addition of ammonium bromide to the ferricyanide solution so greatly accelerates the process of bleaching. The answer is as follows: The ammonium bromide interacts instantly with the slimy deposit of silver ferrocyanide initially formed, giving as the result of the interaction a product which is readily permeable to the bleaching solution. Another lower layer of silver

is rapidly converted into silver ferrocyanide, which is instantly acted on by the bromide, permitting of the ready access of the bleach to still lower strata of the silver image. And thus the bleaching is rapidly completed by an alternation of two separate and independent reactions.

If this view of the matter is correct it necessarily follows that rapid bleaching should result from the alternate immersion of the print in pure solutions of potassium ferricyanide and ammonium bromide respectively. This is the case. The final tone of a print bleached by the intermittent method is the same as that of a print treated with the usual bleach.

The next point to be cleared up is this: What is the nature and composition of the product of the interaction of silver ferricyanide and the ammonium bromide solution? In other words, What is the composition of the final product in the bleached image? It seems to be generally assumed that the final result of the bleaching is the conversion of the silver image into ordinary silver bromide, AgBr.

However long a print remains in the bleach, it is never, literally speaking, bleached. The "bleached" image is always clearly discernible, and has a pronounced brownish hue even when the bleaching operation has been conducted in non-actinic light. But ordinary silver bromide is not brown. If a bromide print is bleached in bromine water (when undoubtedly ordinary silver bromide must be formed) the print is literally "bleached;" it is quite impossible to discriminate between the white image in silver bromide and the white paper which supports it.

Again, a print bleached with the bleach in darkness is readily redevelopable by any of the ordinary developers. But a print bleached with bromine water in darkness must first be exposed to light before it can be redeveloped.

From these two considerations alone it is clear that the bleached bromide print cannot consist of ordinary silver bromide. Of what, then, does it consist? The author believes of a hitherto unrecognized sub-bromide of silver, which for the present is distinguished by the non-committal title—the puce-colored bromide of silver.

The author concludes that the bleached image consists of a dark puce-colored sub-bromide of silver, and that hence results the visibility of the "bleached" image.

The puce-colored bromide would seem to be more readily dissolved by alkaline bromides (potassium and ammonium bromides) than is the ordinary bromide of silver. For if two slips of the same bromide print A and B are bleached, A in potassium ferricyanide containing a fair excess of ammonium bromide, B in bromine water containing the same concentration of ammonium bromide, and the slips are then sulphuretted, it is found that the image of slip A is ever so much more reduced in intensity than is that of slip B. Indeed, an over-developed bromide print may very successfully be reduced and toned at the same time by increasing the amount of bromide in the bleaching bath prior to sulphuretting. In general it may be stated that the greater the concentration of the bromide in the bleach, the colder and more purple is the resulting tone, and the fainter is the picture.

In this connection the point arises whether there is not an unnecessary excess of bromide present in the empiric recipe for the bleaching solution given in the *Almanac*. The molecular weight of ammonium bromide is 98; that of potassium ferricyanide is 329. Even if ordinary silver bromide (and not the puce-colored sub-bromide) were the final product of the bleach, its indirect formation via ferrocyanide would de-

mand the presence of only 1 gram-molecular weight of NH_4Br to each gram-molecular weight of potassium ferricyanide. Whereas the bleach made up according to the recipe contains about 3.6 gram-molecular weights of ammonium bromide per 1 gram-molecular weight of potassium ferricyanide. This apparently unnecessary excess of ammonium bromide may (in view of the susceptibility of the puce sub-bromide to the action of alkaline bromides) have a deleterious reducing effect on the faint details of such prints as, prior to toning, are not over dense but exhibit a satisfactory depth and range of gradation.

It is generally taken for granted that the sulphuretting of the bleached image converts it into ordinary sulphide of silver—Ag_2S. It has always seemed, however, that the correctness of this assumption is *a priori* improbable. For ordinary sulphide of silver is, to use a colloquialism, "as black as one's hat," whereas the finished toned image varies in hue from brown to sepia. Of course, there is the possibility of the dichroism of silver sulphide—a substance which in bulk is black—might in thin layers be brown or sepia colored.

As a sulphuretting agent, the solution of sodium sulphide, of the concentration recommended in the *Brit. Journ. Almanac* was used. But this solution was soon abandoned on account of its poor keeping qualities. The sulphuretting solution was a solution of the sulphydrate (and not the sulphide) of sodium prepared in the following way: Six grams of caustic soda were dissolved in 250 Cc. of water, and the solution was divided into equal portions. One portion was saturated with well-washed hydrogen sulphide, and then added to the untreated portion. A solution so prepared can be used over and over again, and keeps its virtue perfectly for at least six months. Sodium sulphide solution of the strength usually recommended is completely decomposed and worthless for toning purposes in three or four days. In addition to its stability, the sulphydrate solution also possesses the great recommendation that it has a barely perceptible smell of hydrogen sulphide, so that it may be used in the laboratory or studio without annoyance. When, however, the toned prints are submitted to the action of the wash-water, there is a considerable evolution of hydrogen sulphide from them, and therefore it is advisable to conduct the washing out of doors, or at any rate in a room where fumes of hydrogen sulphide can do no damage to man or material. The tones given by this sulphydrate solution have a pleasing purplish tinge, and it seemed that this solution does not choke up the heavy shadows in the picture to the same extent that ordinary sulphide solution is well known to do.

What, then, is the nature of the brown or sepia colored body formed in the sulphuretting bath? The author believes it to be a gelatino-sulphide of silver, probably approximating in its character to the protalbates and lysalbates investigated by Paul and Voss. (Abstracts, *Chemical Society's Journal*, 1902.)

When silver bromide emulsified in gelatine is made slightly alkaline and then treated with hydrogen sulphide, black silver sulphide is not precipitated, but a dark-brown opalescent liquid results, which passes through the blue ribbon brand of Schleicher and Schull's filter paper. (The blue ribbon brand of filter is guaranteed to strain off the finest and most refractory precipitates met with in analytic work.) Or, again, if plates which have been exposed, developed to the utmost, fixed, and then submitted to sulphide toning in the usual way, are treated with boiling water, the same brown opalescent solution, from which no solid can be filtered off, is

obtained. This brown "solution" of gelatino-sulphide of silver is not affected by large dilution, nor is it in any way coagulated or precipitated by the addition of either alcohol or neutral salts. (On standing long, however, it deposits small quantities of a dark-brown solid.) Hence, the author infers that it is not an ordinary colloidal solution, but that it is in all probability an exceedingly fine emulsion of extremely small solid particles—that it is, in fact, a quasi-solution of the type studied by Picton and Linder. (*Chemical Society's Journal*, xli.) If this is the correct conclusion, the very finely divided suspended solid would probably be separable by filtration under pressure through a biscuit-ware pords cell, and the "solution" itself should be capable of polarizing light. These possibilities will be made the subject of further investigation.

The brown "solution" of gelatino-sulphide of silver is decomposed when boiled with nitric acid, a light khaki-colored precipitate being thus thrown down. This precipitate contains both sulphur and silver, since when treated with a mixture of hydrochloric acid and potassium chlorate, silver chloride is formed, and the filtrate gives the SO_4 reaction with a solution of barium salt. It is, therefore, some new form or modification of silver sulphide.—*The British Journal of Photography.*

NEWS AND NOTES.

Production of Platinum in 1905.—The production of platinum from domestic ores in 1905 was 318 ounces, valued at $5320, as compared with 200 ounces, valued at $4160 in 1904; with 110 ounces, valued at $2080 in 1903; with 94 ounces, valued at $1814 in 1902; with 1408 ounces, valued at $27,526 in 1901; and with 400 ounces, valued at $2500 in 1900. In December, 1904, the price of ingot platinum at New York advanced from $18.50 to $19.50 an ounce; in April, 1905, it was $20.50; in February, 1906, it advanced to $25, and in September, 1906, it was $34 an ounce. To-day the price of refined platinum in $48 per oz.

Good Enlargements from Flat Negatives.—It is well known by old pyro workers that yellow stained negatives, as a rule, give much more brilliant prints than the black and white negatives obtained with the modern developers. A German writer suggests the use of a deep yellow screen in contact with flat negatives in order to obtain more brilliant enlargements. This is an old dodge, and the effect may be still further increased by using a small stop. Such a yellow screen can easily be made by soaking an old negative from which the image has been removed in any yellow dye, or in a solution of picric acid or ammonium picrate. This naturally increases the exposure considerably, and with artificial light it may even extend to one hundred times that without a screen. A far better plan is to make a transparency by contact on a chloro-bromide plate, using the yellow screen, if necessary, to obtain the necessary contrast, and then to make a second negative by contact.

There is a method which was suggested about fourteen years ago by Prof. Mach, of Prague, which is often very useful. This is merely to place the negative film down in contact with a sheet of opal glass and copy it in the camera. Very frequently an excellent positive can thus be made, and by copying this in the same way, assuming, of course, that very slow plates are used, the second negative will be found brilliant enough for anything.—*Photo News.*

Carbon Prints on Wood.—Now that so many photographers use the carbon process, I wonder more do not turn their attention to other supports for the image beside the time-honored papers. For a particular decorative purpose, I have just made four twelve by ten prints in sepia carbon, which were developed on boards of American white-wood. The wood was cut to size, and the front surface smoothed with glass paper. As the panels were to be let in to other work, the backs and edges were given two coats of Brunswick black. The front surface was prepared with the mixture of gelatine and chrome alum recommended for paper. I had no trouble whatever in developing the prints on the wood, except that the warm water made the Brunswick black unpleasantly tacky to the fingers, which I got over in the last two or three cases by putting down paper on it before it was quite dry. The prints when finished were varnished with oak varnish, and looked very effective.—*Photography.*

A New Three-color Camera.—The chief want in the practice of color photography is an efficient camera at a reasonable price, which shall enable all three exposures to be made at once. There have been several patented, but the majority have been somewhat complicated and bulky. Herr Schmidt, of Berlin, has now devised one in which three lenses are used, placed in a triangle, as close together as possible, and two prisms of special shape are arranged behind two of the lenses to prevent the overlapping of the images. The advantage of this method is, that as the optical centres of the lenses are only about one inch apart, parallax or the stereoscopic effect is avoided in the images. It also enables the relative exposures being carefully adjusted by means of the stops, which will be an advantage as doing away with the necessity of adjusting the exposures by the filters. On the other hand, there is the theoretical objection that the difference in working aperture may cause differences in definition of the images, but this would not probably be of much practical moment, because the largest aperture would be used for the red image, and a slight fuzziness in this would not be of much moment, the drawing of the image being given practically by the blue one.

The idea of using three lenses in a triangle is not new, but it is the first time, I believe, that they have been put so close together as to necessitate some means of separating the images. The use of three lenses must necessarily increase the cost of any camera, as one of the essential factors for success in three-color work is shortness of exposure, and as this can only be obtained by using large aperture lenses, these naturally become rather expensive if at the same time one requires reasonable covering power.—*Photo News.*

Voice Photography.—The latest information as to Dr. Morage's method of photographing the voice appears, after all, to be the utilization of the old idea of a reflecting mirror on a membrane set into vibrations by the voice. At the fourth Christmas lecture, delivered by Mr. Duddell, at the Royal Institution, a film was exhibited, the photographic record of a voice, which was obtained by a speaking flame and a selenium cell. A much simpler and possibly more useful invention is ascribed to Paulsen, of Copenhagen, by means of which the voice can be magnetically recorded on a steel tape, and which can be applied to the telephone. This is stated to reply when required and inform the caller that the person wanted is out, and on the latter's return the telephone will reel out the message that was delivered in his absence.

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BRADLEY

GARO

CORE

FALK

ROCKWOOD

PHOTOGRAPHERS WHO WILL DEMONSTRATE FOR THE NEW YORK PHOTOGRAPHERS' SOCIETY

THE SINGLE-PRINT EXHIBITION OF THE PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK.

ONE of the features of the forthcoming convention of the New York Society that is well worth copying by other State Associations is the single-print idea, which was provided for by the following resolution carried at the last convention when it was resolved: "That each member of the Society be requested to send to the next annual meeting one photograph which he considers to be his best production of the year, same to be exhibited at such meeting-place, every man's picture to be hung *on a line with every other man's picture*, and be it resolved that no other conditions whatever be added hereto."

It was thought at the time that should this resolution be taken up in earnest the executive would be hard put to find a hall large enough for such a line of prints. Mr. MacDonald, however, was equal to the occasion. He has not only secured the written promises of some two hundred members to send in a print, but he has secured a splendid hall, some six hundred feet in length, allowing ample room for the display of every member's print on the same line.

This all makes for equality and fraternity. Each man will send in his print sure of its display on an equality with every other exhibit. The big man's print will hang alongside the little man's print, and Fifth Avenue will touch elbows with Painted Post. No prizes being awarded, there will be no bad feelings that such and such a print was given a prize.

THE CONVENTION HALL, METROPOLITAN LIFE BUILDING, NEW YORK

So well has the idea been taken that, not only photographers from almost every town and city in the State will be represented, a glance through the list of exhibitors shows that some of the best-known photographers throughout the Union will also send one of their best prints.

To illustrate the widespread interest that the idea has aroused, we give a list of those who have already promised in writing to send a picture according to the resolution:

Abbot, Little Falls; Amman, River Head; Armbruste, Mt. Vernon; Armstrong, Waterville; Avlon, Schenectady.

Bader, Rochester; Baker, New York; Barker, Newark, N. J.; Barrows, Boston, Mass.; Bass, Paterson, N. J.; Bateham, Norwalk, Ohio; Beach, Buffalo, N. Y.; Beals, New York; Bell, New York; Betts, Gloversville; Bigalow, Port Henry; Bill, Cleveland, O.; Black, Jamestown; Blessing, Salamanca; Bliss, Buffalo; Boice, Troy; Bowersox, Dayton, Ohio; Bradley, New York; Brainard, Rome; Briggs, Clifton Springs; Bronson, Waterbury, Conn.; Brooks, Le Roy; Brown, Albany; Byron, J., New York; Byron, P., New York; Buck, Washington, D. C.; Butler, Cortland.

Cairns, Newark, N. J.; Camp, Jamestown; Chamberlain, Johnstown; Clearwater, Waldem; Clare, Schenectady; Cole, New York; Conklin, Newark; Core, New York; Cortright, Owego; Cramer, Mattewan; Curtis, New Haven, Conn.

Darrow, Fulton; Davis, Deposit; Daymon, Mamaroneck; De Groat, Bath; Detrich, Altoona, Pa.; Dillhoff, Brooklyn; Distin, Saranac Lake; Dooner, Phila., Pa.; Doust, Syracuse; Du Bois, Utica.

Eaton, Gloversville; Eddowes, New York; Edmonson, Cleveland, Ohio; Elliott, Austin, Texas; Ellis, Phila., Pa.; Ernsberger and Son, Auburn; Epler, Saratoga.

Falk, New York; Farrington, Delhi; Fisher, New York; Foley, New York; Fredericks, New York; Farrand, New York; Frey, Utica; Fulton, Kingston.

Gabaiault, Albany; Gardiner, New York; Garo, Boston, Mass.; Gernert, Somerville, N. J.; Gessford, New York; Gibbon, Clinton; Gibbon, Utica; Giffin, Wheeling, W. Va.; Goldensky, Phila., Pa.; Graiff, Oxford; Griffin, Albany.

Hale, Geneva; Hall, Albany; Hall, New York; Hague, Lockport; Ham, Cohoes; Harscher, Pittsford; Hart, Watertown; Harris, Utica; Hendrickson, New York; Hearn, Boston, Mass.; Hennigar, Middletown, Conn.; Hoffer, Nyack; Hollinger, New York; Holladay, Durham, N. C.; Holmes, Chateaugay; Holloway, Terre Haute, Ind.; Hanks, New York; Homeier, Richmond, Va.; Howes, Brewster; Hoyt, Rochester; Hyatt, Cortland.

Kalt, Brooklyn; Kellmer, Hazelton, Pa.; Kimball, Concord, N. H.; Knapp, Albany; Kramer, Buffalo.

Langdon, Fulton; Lent, Albion; Lewis, Granville; Lewis, Utica; Lewis, Toledo, Ohio; Lifshey, Brooklyn; Lloyd, Amsterdam; Lloyd, Troy; Lorey, Albany; Lovell, Oswego; Luce, Rochester.

MacIntosh, New York; McCarthy, Binghampton; McFarlin, Elmira; Macher, New York; Mandelkern, New York; Mandeville, Lowville; Marshall, Arlington, Mass.; Marceau, New York; Marshall, Cazenovia; Martin, Rockaway Beach; Mason, Fredonia; Medrick, Middletown; Medlar, Spencer, Iowa; Merrill, Salem, Mass.; Mishkin, New York; Miller, Norwich, Conn.; Mock, Rochester; Mowbray, New York; Morris, Southampton; Murdock, Buffalo.

Newing, Binghampton; Newman, New York; Newton, Oberlin, Ohio; North, So. Norwalk, Conn.; Nusbaumer, Buffalo; Obenaus, Portland Me.; Olliver, Spring Valley; Olnhausen, New York.

Pach, New York; Parkinson, Boston, Mass.; Partridge, Boston, Mass.; Payne, Watkins; Pearsall, New York; Peck, Buffalo; Peck, Newburg; Peters, Brooklyn; Phelps, Sidney; Phillips, Phila., Pa.; Pierce, Peekskill; Pohle, Buffalo; Pruden, Seneca Falls; Puffer, New York.

Rabineau, Albany; Rabineau, Schenectady; Ransier, Manlius; Ray, New York; Rinehart, Omaha, Neb.; Richards, Medina; Robinson, Ithaca; Rockwood, Geo. G., New York; Rockwood, G. H., New York; Rogers, Binghamton; Rosch, New Rochelle; Rosch, White Plains.

Saunders, Rochester; Schonberg, New York; Scherer, New York; Schroder, Troy; Schiever, Scranton, Pa.; Schultz, New Paltz; Sherow, Ossining-on-Hudson; Shervee, Worcester, Mass.; Short, Kingston; Shipler, Clyde; Sibley, Rondout; Sippull, Buffalo; Slater, Watertown; Slote, Cooperstown; Smith, Rochester; Spiess, New York; Stein, Milwaukee, Wis.; Stebbins, Canisteo; Steinberg, C., New York; Steinberg, I., New York; Stone, J. C. M., Brooklyn; Stone, N. L., Potsdam; Strickler, Dunkirk; Strauss, St. Louis, Mo.; Sutton, Hornellville.

Talbot, Schenectady; Taylor, Rochester; Towles, Washington, D. C.; Turano, Allegany; Tuttle, Geneva.

Van Arman, Troy; Van Buren, Ithaca; Voorhees and DeVoe, Dallas, Texas.

Waide, New York; Walton, Roswell, New Mexico; Wendell, Albany; Whipple, Olean; White, Schenectady; Wheeler, Goshen; Whitney, Little Valley; Wolven, Poughkeepsie; Woodworth, Seneca Falls; Wooley, Ballston Spa; Wurst, New York.

THE PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK.

THREE years ago the Professional Photographers' Society of New York did not exist; today it is perhaps the most vigorous, original, and unique photographic body in existence. Its methods are watched, discussed, and copied at home and abroad. There is no more sincere flattery than imitation.

Photographic associations—from the Pacific coast to the other side of the Atlantic—are seeking to know more of its constitution and operation. A so-

ciety that has made such a phenomenal success must have many good points in its favor.

The division of a State organization into sections enables the different sections to handle the various local problems as they arise, with a prompt action that would be almost impossible if decision had to be awaited from a full State association.

A case in point was the recent case where a New York photographer was made to pay damages for allowing the portrait of one of his sitters to be used for what was held by the court to be advertising purposes. The Metropolitan Section immediately obtained a legal opinion on the law under which this action was taken, which, communicated to the members, gave them a definite understanding of their position in the matter. The section further deciding that should any of its members be proceeded against the section would assume responsibility. Nothing could illustrate better the helpfulness of such an organization.

Another unique feature of the New York Society is its independence. It is entirely self-supporting, seeking no outside assistance whatever, the dues of its members being the only source of income. Conducting its convention as a gathering of photographers for their own betterment, it does not sell floor-space to the manufacturer to pay the expenses. At the forthcoming meeting in April it will entertain its members at dinner at "Little Hungary," at a cost per head of half the dues, and will not have to go round collecting an entertainment fund which is such a common practice at the usual State associations. Even its program and catalogue of exhibitors will appear without a single advertisement. This feature almost takes away our breath, remembering the requests we receive almost daily to take advertising space in the hundred and one association and club programs.

The single-print idea, which is commanding so much attention, is mentioned in another column.

Another progressive idea of the New York Society is its offer of fifty dollars in gold for an idea that is voted by the members to be of the greatest practical value in the average studio. This should bring to light many a useful dodge at present of benefit only to its originator.

The greatest and most unique feature of the convention will be the series of demonstrations under the light, in their own studios, given by five of the best photographers in New York—Bradley, Core, Falk, Hollinger, and Rockwood—and Garo, of Boston. Members of the Society will have the opportunity of seeing just how these men make the pictures which have made their names famous in photographic history. No other feature illustrates so thoroughly the immense possibilities for fraternal helpfulness and coöperation for the common good as when men of such prominence will devote their time to demonstrating the methods which cannot but be of great help and value to their less experienced brethren.

In conclusion, we would urge the officers and members of other associations to watch the proceedings of the New York Society which, under the able presidency of Pirie MacDonald, promises to be a record breaker in point of interest and helpfulness. The gathering takes place at the Metropolitan Building, New York, April 3 and 4. A full report of the proceedings will be given in our May number.

Cement for Vulcanite.—Sulphur, 1 part; caoutchouc, 3 parts; alcohol, 6 parts; bisulphide of carbon, 100 parts. Mix alcohol and bisulphide, and then dissolve caoutchouc and sulphur therein. Evaporate to consistency of thin paste.

ANNUAL MEETING OF THE PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK.

TRANSPORTATION AND HOTELS.

THE New York Photographers' Society is favored in many ways. Holding their annual meetings in New York City, they have abundant opportunities for reaching headquarters. All roads lead to New York, and innumerable trains make attendance at the meeting possible with the least amount of inconvenience.

The Railroad Passenger Associations have granted special fare and one-third rates on the certificate plan. Tickets may be purchased as early as March 30. Do not fail to get a certificate when purchasing your ticket, which upon arrival at New York must be deposited with Mr. Walter E. Talbot, First Vice-President, who will have it validated, enabling you to purchase your return ticket for one-third the regular fare. The two things to be remembered are: not to forget to ask for a certificate when you buy your ticket, and to be sure to deposit it with Walter E. Talbot upon arrival.

In the matter of hotels, there is perhaps no city in the world so well supplied with first-class hostelries. The Metropolitan Life Building, where the meetings are to be held, on Madison Square and Twenty-third Street, is within a few hundred yards of the city's finest hotels. The New Grand, which we understand is to be the official headquarters, is at Broadway and Thirty-first Street. On Broadway, that section known as "the great white way," within a few minutes of the assembly hall, are located the following well-known houses: Fifth Avenue, Hoffman House, Victoria, Breslin, Gilsey House, Imperial, Marlborough, Normandie, the New Knickerbocker, The Astor (remembered as last year's headquarters), and not to be forgotten, at Fifth Avenue and Thirty-fourth Street, is the Waldorf-Astoria—certainly choice enough for every taste.

At the New Grand there are eighty rooms at $1.50 and eighty at $2.00; double room for two persons, $3.00; room and bath, $2.50. Photographers seeking rooms at the lower figure would do well to put in their reservation at an early date to prevent disappointment.

NEWS OF THE CONVENTIONS.

Professional Photographers' Society of New York will hold its convention April 3 and 4, in New York.

Southern Tri-State Photographers' Association. Next convention at Columbus, Miss., April 9 to 12. W. L. Ricks, Valdosta, Ga., Secretary.

P. A. of Pennsylvania. Next convention at Williamsport, April 23 to 25. E. E. Seavy, New Castle, Pa., Secretary.

P. A. of Wisconsin. Next convention at Milwaukee, April 23, 24, and 25. J. M. Bandtel, 479 Eleventh St., Milwaukee, Wis., Secretary.

P. A. of Iowa. Next convention at Des Moines, April 9 to 12. G. E. Fahr, Bonaparte, Iowa, Secretary.

The Indiana Association of Photographers will hold its convention at Winona Lake, July 8, 9, 10, 11, and 12.

This association has retained Mr. W. S. Lively as class instructor and will award gold buttons to all members who receive a rating of 80 per cent. or over.

The various secretaries of the above associations will be pleased to give all information in regard to these conventions on application.

Nebraska Photographers' Association. Eighteenth Annual Convention, Lincoln, Nebraska, May 22, 23, and 24, 1907. This is to be a practical convention, a school of photography, abounding in helpful things for the worker who is striving to raise the standard of his art.

"To get the full benefit of the convention you should bring a display of your best work. The judges will be pleased to point out the strong and the weak points in your pictures, and this will be to you of the highest educational value. Our judges are men of wide experience and large, kind hearts. You cannot fail to reap immense benefits by coming in contact with them, and absorbing of their wisdom in pictorial things."

Prizes: Two beautiful silver loving-cups, seven gold medals, six silver medals, and the Salon honors.

Alfred T. Anderson, Secretary, Kearney, Neb.

Photographers' Association of Illinois. The ninth annual meeting of the Executive Board was held at Paxton, Ill., February 3, 1907, President S. W. Stout in the chair.

After several lengthy discussions regarding the aims and advantages of a photographic convention, it was decided unanimously that the Ninth Annual Convention of the Photographers' Association of Illinois be one of education.

The Secretary was instructed to procure the best talent that the country afforded for a series of lectures to be given during the convention, aiming to teach those attending, not only everything new regarding the business, but also how to make more dollars out of the old business.

A lengthy programme, which will be announced later, was then arranged.

A larger number of prizes for exhibits was provided for. A list of these will also be announced later.

The convention will be held at the Palmer House in the city of Chicago, May 6, 7, 8, and 9, 1907.

All communications regarding space for displays, space for advertising, and any other information regarding the Ninth Annual Convention, should be directed to W. A. Graber, Secretary, care of Walinger Co. Studio, 156 Wabash Ave., Chicago, Ill.

Officers of the Association: S.W. Stout, President, Paxton, Ill.; Chas. E. Jay, First Vice-President, Paris, Ill.; H. B. Medlar, Second Vice-President, Woodstock, Ill.; R. H. Mann, Treasurer, Virginia, Ill.; W. A. Graber, Secretary, 156 Wabash Ave., Chicago, Ill.

Photographers' Association of Pennsylvania.—In connection with the annual convention of this Association it is announced that the American Aristotype Company will hold one of their well-known schools of instruction. They have secured a large hall near the convention meeting-place. Their experts will demonstrate photography right through, from making the exposure to finishing and mounting the prints.

The school will be run continuously during the afternoons and evenings while the convention lasts. It will be absolutely free to all photographers attending the convention and gives the photographer an opportunity of attending a convention and a first-class school of practical photography at the same time.

Flashlight mixtures should not be handled roughly; they are liable to explode.

A NEW PHOTOGRAPHIC SHUTTER.

In the exposure of a sensitive plate in the camera, under ordinary circumstances, it is impossible to get a correct timing for all the different parts of the plate, for the reason that such parts of the view, which are more generously illuminated, will be greatly over-exposed when the right timing has been given to the shadows. This is particularly true of landscapes where it is desired to have the cloud effects as well as the proper definition of the various features of the composition. In order to overcome this disparity it has been necessary to resort to the use of a ray filter which was undesirable because it greatly prolonged the exposure, or to make use of a process known as "double printing." In the latter method the photographer makes two plates from the same viewpoint; one timed for the sky and the other for the foreground. Each is put through the various operations of development, and when it comes to making the print, the sensitized paper is exposed for the sky under one plate and for the foreground under the other. This work must be very neatly done or the imposition will be detected.

After a long period of experimenting, a camera shutter has been devised by a well-known optical firm by which it is possible to illuminate the plate properly, no matter what the conditions of light may be. As on the plate in the camera the sky is reversed, and so at the bottom the rays of light from the sky must enter at the top of the front lens and cross the rays of light from the foreground at the diaphragm point. It is a fact, therefore, that a shutter working before the lens which admits more light from the bottom than from the top will necessarily equalize the exposure. This is what is done by the new shutter. It has but one leaf or blade which rises from the bottom, the speed being regulated by an indicating device. No matter what the time of exposure may be, the sky will be given a very much shorter period than the foreground. Thus it is possible to give one part of the plate a second while the other will receive but one-eighth. This shutter is placed before the lens and is supplied with an automatic clamping device which makes it readily attached and detached. An ingenious regulating feature makes it available for all kinds of work, as well as for the purpose for which it was designed.—*Scientific American.*

Non-inflammable Celluloid.—"A kind of celluloid," which is not inflammable is said to have been patented in Italy by a British inventor, and will probably cause a keen competition with "tortoise-shell," the making of which has been largely a monopoly in Naples. It is claimed for the new invention that in the most aggravated circumstances it will only carbonize, and not flow like a stream of melting sealing-wax, setting fire to any inflammable substance that may happen to come in its way. The immunity from taking fire is secured by mixing glue gum arabic, and colza oil with the original substance when in a liquid state, and purifying it from sediment by various processes until it becomes perfectly clear, when it can be worked up to resemble any kind of tortoiseshell at a very much lower price.

If this new non-inflammable celluloid can be worked up clear, it ought to be of some value in photography to replace the ordinary kind of celluloid. The number of times substitutes for celluloid have been reported and patented within the last ten years is extraordinary, but not a single satisfactory substitue has yet been found.—*Photo News.*

HOW I USE PYRO.

BY STEPHEN E. WOODBURY.

It is safe to assume that every manufacturer of dry plates has furnished developing formulæ which will give good results with his plates. A comparison of the formulæ for any one developer for the different kinds of plates will show considerable variation. Thus it follows that a formula suitable for one make of plates ought not to be used for any other.

In spite of an oft-repeated admonition, nearly every one engaged in photographic work uses more than one kind of plates. A cheap single-coated plate does very well for many purposes. A double-coated plate is needed when halation is to be avoided. Films are used when convenience of carriage is most important. When the quality of results is compared with the financial side of the question, it is often found that all desirable features are not combined in the different plates of one make. Consequently, the photographer who uses different plates finds himself face to face with the question of keeping numerous stock solutions or of sacrificing the quality of results to the convenience of an average developer.

For the many who consider pyro a good developer, the following will offer a convenient method for using the variously proportioned formulæ. Sulphite and carbonate of soda are prepared by making up 10 per cent. stock solutions. The table gives the number of grams of each chemical needed for 120 Cc. (4 ounces) of developer for the different kinds of plates. Suppose a developer for Cramer plates is to be made. First, place 0.6 of a gram of dry pyro in a 120 Cc. graduate. Pour into this 24 Cc. of the stock solution of sulphite, which is ten times as many cubic centimeters as there are grams of sulphite of soda given in the table. Since this is a 10 per cent. solution, as many grams of sulphite of soda have been taken as are required by the table. In the same manner take 12 Cc. of the carbonate solution, which is ten times as many cubic centimeters as there are grams of carbonate of soda given in the table. The graduate will now contain 36 Cc. of solution, which is ten times the weight in grams of the sulphite and carbonate combined; as given in the fourth column of the table. Thus it is seen how the fourth column may aid one when adding the carbonate solution. Filling the graduate to 120 Cc. with distilled water one will have a developer agreeing with the manufacturer's formula, but made with dry pyro and universal stock solutions. Bromide of potassium can now be added as usual.

In order that the photographer may extend the table, the calculation of one set of results is here given. Take for example, the formula for Seed's plates.

A.

Water	16 ounces.
Pyro	1 ounce.
Oxalic acid	10 grams.

B.

Water	16 ounces.
Sulphite of soda (dry)	2 ounces.

C.

Water	16 ounces.
Carbonate of soda (dry)	2 ounces.

(If crystal sodas are used, double the weight.)

Use

A	1 ounce.
B	1 ounce.
C	1 ounce.
Water	7 ounces

Making up the developing solution sixteen times will just use all of the stock solutions. Therefore, the quantity of materials used for the total amount of developer is as follows:

Pyro	1 ounce.
Carbonate of soda (dry)	4 ounces.
Sulphite of soda (dry)	4 ounces.
Water	160 ounces.

These quantities are reduced to four ounces of solution by dividing by forty, and will then read:

Pyro	.025 ounce.
Sulphite of soda (dry)	1 ounce.
Carbonate of soda (dry)	1 ounce.
Water	4 ounces.

By the aid of the following equivalents, these values are converted into metric weights and measures:

1 ounce, apothecary or troy	=31.1 grams.
1 ounce, avoirdupois	=28.35 grams.
1 fluidounce	=29.6 Cc.

These results are given in the table. Usually it will be sufficiently accurate to call 1 ounce apothecary equal to 1 ounce avoirdupois equal to 30 Gm., and 1 fluidounce equal to 30 Cc.

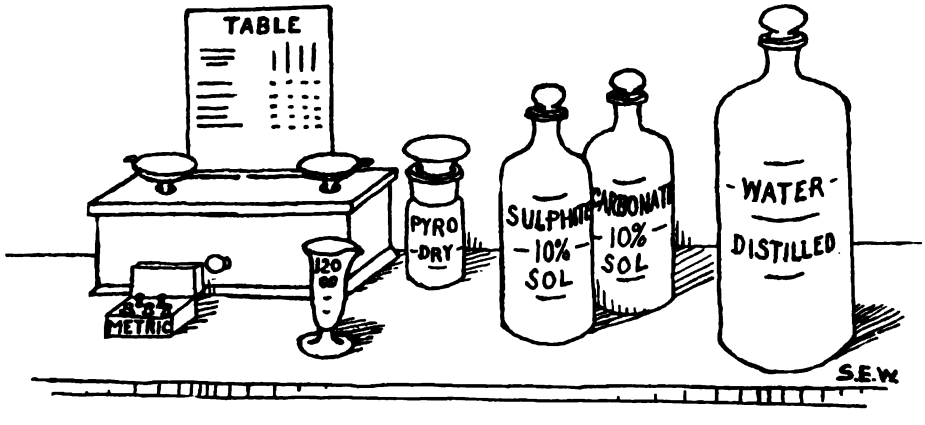
Should conditions, such as a difference in temperature, a change in the quality of the chemicals, or special printing requirements in the negative, indicate that the quantities should be varied, note can be made of the change and the next solution made up accordingly. The small quantity of some acid which is usually specified in the formula serves only as a preservative of pyro in solution. When dry pyro is used this is, of course, omitted. The amount is so small that no correction is needed in the table.

Nearly all developers for non-halation plates are made by diluting, more or less, the usual solution. The values in the table were obtained in this manner. It is well known that the quantity of sulphite of soda used should vary somewhat with the bulk of the developer and not be in proportion to the other chemicals. Consequently, if a value given in the table results in too yellow negatives from non-halation plates, it is suggested that the quantity of sulphite of soda used be intermediate between the value given for non-halation plates and that given for the regular plates.

TABLE.—*Pyro Developers.*

Grams of each chemical for 120 Cc. of solution (From formulæ of manufacturers.)

	Pyro	Sul. Soda (cry.)	Car. Soda (cry.)	Car. and Sul.
Cramer	0.6	2.4	1.2	3.6
Hammer	0.29	2.2	1.1	3.3
Hammer Non-halation	0.224	1.7	0.85	2.55
Stanley	0.775	4.65	4.65	9.3
Standard	0.71	2.12	2.84	4.95
Standard, Orthonon	0.442	1.33	1.77	3.1
Seed	0.71	2.84	2.84	5.68
Seed, Non-halation	0.34	1.35	1.35	2.7
Eastman N C Film	0.405	2.43	1.61	4.04



COMPARATIVE PORTRAITURE.*

BY SIDNEY ALLAN.

THERE has been, of late, a good deal too much talk about Art in photographic circles, and I must confess that I myself have been responsible for a big share of it. As you may know, I have grown up in the ranks of the secessionists; but I can assure you that there are days when I fastidiously avoid meeting a pictorialist of any sort and almost regret what I have written in days of useful enthusiasm.

We all know the aim of the extreme pictorialists: their sole aim is to render the photographic print esthetic. Now, one has not to be very subtle to see that continual estheticism is apt to grate on one's nerve. One cannot live all the time in a blessed atmosphere, with weird high-lights on one's nose. To regard men and women simply as ingredients for pictorial formulæ; to study them curiously, as you would some queer Japanese butterfly; to dress them up like lay figures—that is to take a mighty one-sided view of humanity.

And even granted that they have accomplished their aim—that pictorial photography, in rare instances, has become a medium of art expression. Pray what has that to do with portrait photography? Portrait photography, although a luxury in a way—all Art is luxury—has become almost an article of necessity. Everyone nowadays wants to be photographed. Each man and woman, no matter of what station, will at one or another time in their lives submit to this record of facts; and the result will surely be criticized by the entire family and all friends and acquaintances, who think they have the right to sit in judgment upon it. The portrait photographer has first of all to sit in judgment upon it. The portrait photographer has first of all to please the public. He has to obey all their whims, if he wants to be successful. He cannot assert his right, as the artist can. He cannot experiment, like the pictorialists, for the public does not want any of his individual artistic interpretations. They want something they can understand at the first glance. To them a photograph is a utilitarian article, and for these reasons portrait photography is a trade and should be handled like a trade.

What does the public want? The question which interests the public most is whether a picture is a good likeness or not. By this verdict, in their eyes, stands or falls the merit of the picture; and the position the public takes in this matter is a perfectly sane one. The aim of the portrait photographer should be to produce a likeness, a likeness that reveals in one attitude as much of the sitter's individuality as is possible in a flat-surface view. Beauty of outline, truth of values, arrangement of space, contrast of light and shadow, harmony of tone, are all secondary attributes. The sitter has a right to demand, first of all, a likeness, and ought to have one for the time and money he spends.

Some of the pictorialists pursue paths on which I am unable to follow. The so-called blurred effect is an anomaly; for clearness of expression is one of the principal characteristics of photography. Of course, this kind of photography may appeal to a certain class of people with fastidious taste, but they represent an exceedingly small fraction of the large

* An address given before the students of the Milton Waide School of Photography, New York.

mass of the public whose taste is of a more normal and practical order. I would not mention all this if the clamor for high art had not also reached the ranks of the professional photographers. They also want to give something artistic to their customers. They also want their prints to elicit the remark, "It is not like a photograph but more like a picture." All this talk about Art makes them feel a little bit ashamed of their profession. They feel no longer any pride in its performance, and would like to find some means to conceal its mechanical methods. But the change is not an entirely satisfactory one. Also, the picturesque appearance of the work throughout the country is of a higher order; the getting of likeness has suffered thereby. For many sacrifice everything, even ordinary common-sense, in order to secure a pictorial effect. They represent their sitters in keeping with their own artistic fancies, or take mediocre painters as models of their composition, and the results, of course, are disastrous. They imitate by all sorts of trickery, black and white processes, and the pictorial side of painting in general, and produce something which, in my opinion, will become as unbearable as the old-fashioned photographs. And what is the result as far as the public is concerned? The photographers get into trouble, into a continual feud, with their customers. They want them to accept something that the customers do not want, or do not understand, and of course they rebel against such treatment.

It is naturally different in different places. You can afford to be more artistic on Fifth Avenue, New York, or Tremont Street, Boston, than on the Bowery or some provincial town. Everyone must size up the community he works in; size up the wants of the particular part of this community he appeals to, and then go artistically as far as he can afford to go with his particular class of clients. That seems to be the secret of success. I have seen men who did an excellent business with the middle-class population suddenly become ambitious to become "society" portrayers. They opened up fashionable studios on the main thoroughfare, and, although they continued to do excellent work, in nine out of ten cases they lost all their hard-earned savings within a year or two, and finally had to shut up shop and return to the quarter from whence they originally started. It would have, in their instances, been wiser to have let Art wait. Our abilities are all limited, and before making a change we should examine ourselves most carefully whether we really possess the faculties of making a change. There is not the slightest doubt, however, that good honest work can be done anywhere. No town is too small for good honest portraiture. It may not look quite as elegant, the size may be smaller, the mounts may be cheaper, etc., but these attributes are, after all, of secondary consideration. The principal thing is whether it is good portraiture; whether it gets at the true character of men, women, and children; whether it tells the story to those who are especially interested in the personalities portrayed.

To those in my audience who want to become professional photographers, I would say: Keep in touch with the latest methods, notions to secure sitters, ideas and customs of the studios in your town, as well as all over the country, and you will have abundant opportunity for the use of your talent. The vignetted portrait upon a white or light ground is coming into vogue again—I have seen it taken up by several New York studios with great success; sooner or later it will strike your city, your town; be prepared for it, or rather be the first to take it up. Try to produce work distinguished for quality, each of you in your own

line, and send it out in the most attractive style that you can think of and afford. Your customers will soon see the difference between indifferent and the elegant work.

Charge as high prices as you possibly can. Do not charge according to cost of material. Because your neighbor works for little or nothing, it should not induce you to do the same. An empty pocket-book is a useless commodity. I have been there myself and know how it is. But never get that curious notion into your head that the price has nothing to do with merit. Get each as much as you can; but do not think that a dozen at $35 or $75 (the price our illustrious J. C. Strauss commands) is more entitled to the name of Art than the dozen at $15, $12, $6, or $3. It depends entirely upon how the work is done. Some of these men are obliged to be high-priced in order to pay the exorbitant rent of their lavish establishment, their staff of employees, the chauffeurs of the automobiles, and the running expenses of their country residences. We cannot blame them for these luxuries; on the contrary, they are wise and deserve all credit for living at their ease. They raise the standard of their profession, but only if their work has kept pace with the advance of their price.

As for the artistic element in portraiture, I cannot repeat often enough: Stop imitating; do something original, then there will still be time enough to discuss Art. Although the members of the profession can hardly lay claim to being intensely sociable to each other, they seem to make an exception when it comes to the practice of their profession. There the majority seem to stick very close to each other. Few step off of the beaten path and care to strike out for new fields. I have grown rather tired of faces that look like masks; of women that look like fashion-plates; of men who are subordinated to their collar and frock-coat. There has been a little too much of that sort of thing. The essential thing is, after all, the face. Everything else should be subordinated to it.

I have also noticed that the physiognomy of the hand does not seem to cause much perturbation to the average photographer. There are few portraits in which the hands are expressive and at the same time accurate. In the majority of portraits the treatment of the hand is either entirely overlooked or of so slovenly an order that one would prefer not to see them at all. And yet as Charles Davis, who is one of the few who fully realize that the hands are characteristic of the disposition of the sitter, one day remarked to me: "All that is necessary to good hand-photography is to bring the hands into the same focal plane with the face."

I also object to the general tendency of producing an effect by a limited scale of tones. This has been introduced by the extreme pictorialists, and is only the reaction from the old-time photograph when the scale of tones extended to sixteen to twenty variations, commencing with the white paper for the high-lights and ending with the solid black in the shadows. The right thing seems to be a method between the two extremes. A scale of, say, five to eight tones, generally introduced, would do a good deal toward simplifying the process of retouching.

Vanity, of course, is a characteristic of human nature, and we are all vain enough to want to look prettier than we really are. How to change this I cannot see. Well, there is really not such a serious objection to the photographer playing the part of the fountain of youth, to take out wrinkles and remove blemishes. If a woman with a drooping eyelid is otherwise pretty, why not be merciful and throw the objectionable eyelid into shadow so that it becomes

unnoticeable? In the same way, why be cruel to a man with a crooked nose, if the latter can be high-lighted in such a way that its contour is lost against the cheek? I think it may be safely said that the ladies are more susceptible to undue flattery than are men. That being conceded, it is only fair to say that when men are open to flattery they will go considerable distance to secure a record; in fact I know examples that would make us all blush for our sex. In my own experience—I was once a negative retoucher, years ago—a complete alteration of the nose was but an ordinary affair. I remember I also had often to improve the symmetry of a gentleman's back, when increasing weight and years had somewhat marred its former beauty.

What we ought to consider is to be more judicious in our flattery and use greater skill and thought in carrying it out. The shape and quality of a touch should be entirely governed by the shape and quality of the blemish; neither should our touch, however free from mannerism, be too positive and defined, as this will tend to destroy the quality of the skin. Regulation touches —dot, S-shape, or cross-hatch—will give you what is called texture or grain, but they will not give skin appearances, and the point to be considered is, do we prefer texture or skin in a portrait?

One of the curious things that I have noticed is that so many pictures that are technically good, that are printed from excellent negatives, with all detail faithfully produced and conscientiously worked out, after all, may be found painfully uninteresting. The advanced photographer says, because the composition is uninteresting or badly chosen. I am of the opinion that it is far oftener the case that the sitter has been so uninteresting that nothing could be done with him or her; or, what is more plausible, that the photographer did not get interested in the sitter sufficiently to bring his best faculties into play.

To conclude, I can only repeat that a good photograph is synonymous with a characteristic likeness, and I even go further than that by saying, a portrait photograph cannot be good without being a characteristic likeness—which is what the public requires.

THE INTENSIFICATION OF PRINTS.

BY F. J. MORTIMER.

To the exhibitor who makes a hundred prints from one negative, before he produces the ideal result that gives complete satisfaction, a suggestion for the intensification of any print may seem unnecessary. There are, however, others who, in addition to possessing the desire to apply such an after-process to a print, may also have other motives of an investigative nature in view when undertaking the task.

Even with the most careful work, carbon, platinum, and bromide prints cannot be invariably produced that possess the exact degree of depth required. In the daylight processes there is the difficulty of judging an actinometer correctly, or of estimating the depth of a print from a feeble image. And in all there is the additional variation due to the fact that a print when wet always differs in depth and effect from the same print after drying. This difference in effect may not always be estimated correctly when the print is developed, as the feeble light in which

the work is conducted renders judging the final effect in daylight more difficult.

The print may be perfect in the relation of one tone to another, but somewhat too weak to be quite satisfactory; and there may not be an opportunity of taking another.

Apart from this, many "toning" processes are in reality forms of intensification, and it behooves the careful worker who intends to finally tone his print by such a process to prepare it in such a way that it also needs intensification, or the result may succeed only in making a print that is already dark enough much denser than is required.

P.O.P. and Plain Salted Papers.

The possibility of intensifying a P.O.P. print is not fully realized by the average worker, and it may be argued against it that "it is so easy to make another" print that the process is unnecessary. Nevertheless, occasions arise when it is only possible to produce in a certain time a very weak or under-exposed print from a very dense negative, and an intensifying process is very useful.

If the print is untoned and has not been light-struck to any extent, one of the well-known formulæ for the development of P.O.P. will bring the print up to full density. If, however, the print has been toned and fixed, and is too weak or thin, an intensifier can be applied.

It is in fact a useful plan, in the case of an under-exposed P.O.P. print that has been accidentally veiled over by exposure to light other than that coming through the negative, to tone and fix it, or merely fix it, and then intensify the image. In this manner the development of the fog over the high-light of the picture is avoided.

Insufficient printing sometimes occurs when making a print from a quick-printing or thin negative. This does not necessarily mean a weak negative, but one that contains full detail and gradation but is very thin. This type of negative requires the printing to be carried much further than when printing from a dense image.

The print will be found to lose considerably in depth during the operation. of toning and fixing, and intensification must be resorted to if it is to be saved. Unfortunately, the easiest process that is available is not very permanent. The well-washed print is bleached in mercuric-chloride solution (10 grs. to 1 oz.), and after thorough washing is blackened in ammonia, 1 dr.; water, 10 ozs. A pleasing warm color is produced.

An alternative process is to use an acid solution of hydroquinone to which a little silver nitrate has been added, but in this case the whites of the print are very liable to get stained.

If plain salted papers are used, that is matt-surface silver papers, generally of home manufacture, it is possible to employ a method of intensification for the prints that will also give a very fine brown-black tone.

This is obtained by silver intensification after fixing. To secure a clean result free from stains, great care must be exercised in thoroughly fixing the print and in well washing it afterward. The Wellington intensifier of sulphocyanide and silver is applied, and the image is intensified and toned to a rich sepia color at the same time.

If this process is to be employed for toning, it is well to stop printing before too much density is obtained. The print is finished by again washing.

Bromide Prints.

Almost any good negative intensifier may be used for the strengthening of bromide prints. Most, however, result in a change of color as well as an increase of strength, the change being almost

invariably in the direction of greater warmth of tone. In all cases it is very necessary that the print should be clean and free from fog, and thoroughly fixed and washed. If not, staining and loss of quality will inevitably occur.

The simplest method is mercurial intensification. The print may be bleached in mercuric-chloride solution (10 grains of mercuric chloride in 1 ounce of water), rinsed in two or three weak acid baths, and then well washed. A 1 per cent. solution of hydrochloric acid is a good strength. It may then be blackened in a solution of ferrous oxalate, formed by adding one part of a saturated solution of ferrous sulphate to six parts of a saturated solution of potassium oxalate. This gives a good neutral black image.

An alternative method of using mercury is to bleach the print in a solution consisting of mercuric chloride 50 grains, potassium bromide 50 grains, water 5 ounces. When thoroughly bleached the print must be rinsed, treated with the weak acid solution as in the preceding method, and then well washed. For blackening various solutions may be used. Sodium sulphite, ½ an ounce in 7 ounces of water, is one of the best. This gives a black tone distinctly warmer than the color of the original print. Potassium metabisulphite may be substituted for the sodium sulphite, 60 grains in 4 or 5 ounces of water. The color of the print tends toward purple-black. Ammonia should be avoided as a blackening agent on account of its lack of permanence.

Platinum Prints.

Platinum prints may be intensified in a solution containing platinum prepared at the time of using from two stock solutions.

No. 1	Sodium formate	1 ounce.
	Water	10 ounces.
No. 2.	Platinum bichloride	50 grains.
	Water	5 ounces.

Fifteen minims of each should be added to 2 ounces of water and the print immersed in this bath until sufficient strength is attained. The action is slow, from ten to twenty minutes being necessary in most cases. As soon as the print is sufficiently strong it is taken from the solution and washed in plain water.

Another method is Dollond's process of gold toning. It gives slight strengthening only, and makes the color of the image colder. The print should be thoroughly wetted in warm water, and then, after blotting off the surplus moisture, laid on a sheet of glass that has been carefully warmed. Glycerine must be rubbed over its entire surface so as to produce a coating as even as possible. A few minims of a strong solution of chloride of gold should then be poured on, and rapidly brushed in all directions, so as to cover every part of the print. As soon as the action of the gold solution has proceeded sufficiently, the print must be well rinsed in plain water, and then sponged over both on the back and the face with a metol developer of the following strength:

Metol	5 grains.
Sodium sulphite	50 grains
Potassium carbonate	25 grains
Water	2 ounces.

After treating with this developer the print requires to be well washed.

Carbon Prints.

The most successful method of intensifying is by means of pyro and silver. A solution of ammonio-nitrate of silver is first prepared. Twenty-five grains of silver nitrate are dissolved in 5 ounces of water, and ammonia added to the solution until the muddy precipitate that forms is completely dissolved, and the solution becomes clear and colorless.

The print must be immersed in this solution for from two to ten minutes, rinsed in water, and then placed in a bath mixed at the time of using from two stock solutions. The first is:

No. 1.—	Pyro	120 grains.
	Citric acid	300 grains.
	Water	5 ounces.
No 2.—	Silver nitrate	40 grains.
	Water	5 ounces.

For use, 2 drams of each should be taken to 2 ounces of water. The print is immersed in this solution until it is sufficiently strong, and then washed and fixed in hypo—4 ounces to the pint—well washed and dried.

Another method of strengthening a carbon print consists in simply immersing it in a strong solution of potassium permanganate for a few seconds. The strength should be 20 grains of permanganate in 1 ounce of water. After a brief immersion the print must be well washed and dried. If not sufficiently strengthened, the operation may be repeated.—*Photo News.*

A LINK WITH THE PAST.

SOME few days ago we had an enjoyable visit from one of photography's veterans, Mr. J. E. Beebe, of Chicago, who was President of the Photographers' Association of America in 1883, which in that year held its convention in Milwaukee—and the accounts we have write it up as a most successful convention.

It was Mr. Beebe who put admission to the Convention on a business basis by laying down the law that the men who paid their dues were the only ones entitled to be present at the meetings.

We refer to Mr. Beebe as a veteran only in the sense that he was one of the earliest photographers in this country to make dry plates, in every other respect he is one of the youngest and most cheerfully optimistic photographers we have met in some time.

Dr. Beebe—he has taken his degree in medicine and been a practicing M.D.—since the dry plate days, was enthusiastic about the numberless fields that are opening up to photography, ariel or balloon photography, color, advertising, magazine illustrating, commercial, record, scientific research, and the thousand and one other subjects that photography is being applied to, all opening up fields that the average photographer has not yet dreamed of.

Mr. Beebe, having abandoned medicine to a certain extent, is doing a lucrative business in the advertising line, preparing photographic copy for some of the biggest Chicago advertising houses.

The photographer who has any dull times in his studio business would do well to study the advertisements in the leading magazines. He might find many an idea that could be worked up for local use.

THE TEETH IN PHOTOGRAPHY.

BY G. G. MITCHELL.

I DO not recall any paper in the journals or year-books specially treating the above topic, though the matter is one which is not without interest to the portrait photographer, seeing that it is being continually brought before his notice in practice. I should say that perhaps one out of every twenty sitters, or so, will more or less make a claim upon his attention in this connection.

It is remarkable how differently photography presents some things as

compared with hand art, or as they appear to the eye. No doubt this is accounted for in large measure by its uncompromising literality, which declines alike to mitigate a defect or to favor a good point beyond its due, without a good deal of what might be called careful circumventing, aided by experience and natural tact. All the facial members demand attention, but I think it will be admitted that the mouth and all about it give most trouble of any of them. The feeling which most sitters have when they first see their photographic presentments is that we have contrived to make the mouth appear too large, too heavy, and so on, but it is more particularly regarding the plenishing of this useful organ I wish to write.

The teeth, however perfect, regular, and beautiful they may be (and their owner justly proud of them), next to nobody wants prominently exhibited in their photographs. Fortunately the majority of people can close the lips in an easy, natural manner, but many cannot do so without a conscious and obvious effort, caused by a prominent interior formation. This obvious strained effect is duly registered by the camera, and the question will often arise in the mind of the operator, Should the sitter close the lips or leave them apart as is his wont? In some cases nothing else than this last can be done, and whenever the choice between a strained effort and that which is usual to the sitter must be made, the latter, with all its defects, is decidedly preferable, because that subtle thing we call expression will be less interfered with in the latter case. It is a risky matter to directly make suggestions regarding the disposition of some members, say of the hands for example, lest we make things worse, and no less is it a risk in reference to the mouth. A request to close it is apt to produce a too firm and compressed appearance with some sitters, who unconsciously assist the operator overmuch.

I have found that a light, reposeful position of the lips is got by most people if they just quietly close or shut the teeth together, for many sitters close the lips while the teeth remain apart; but, of course, each sitter must be dealt with on his own merits.

The subject is in some respects a delicate one to manage; but, given an operator who has a proper appreciation of this feeling, much can be accomplished.

When it is decided that the teeth must be left visible they can often be made less conspicuous if the face is turned from the light—the side-light diminished and a high side-light increased. The effect of this is to throw the mouth in the shadow of the upper lip; at the same time care should be taken to pose that side of the face which will best lend itself to the object in view.

The screening effect of this shadow can be advantageously observed when a portrait of this class is viewed by reflected light through the back of a negative. I have known a sitter to like a portrait seen in this way, who demurred to it in the finished print, which then revealed details not seen in the other form. Let the shadow therefore be deep enough to print well out.

It is a little out of the retoucher's way to make good dental deficiencies on the negative, but when necessary this is just what he should do; modeling here is equally called for with that of skin texture, the removal of wrinkles, etc., and very few will object to it.

Just one more suggestion. It is not in the power of every sitter to easily call up what may be described as a latent smile. Any approach to the idea of smiling reveals the teeth. I have often in such a case secured the wished-for effect by drawing attention away from the mouth by asking the intelligent sitter to smile with the eyes,

or to smile in thought, or to call up the conception of a bright, sunny look.

The foregoing remarks are intended to apply to everyday studio portraiture. When genre pictures are aimed at, or costume and character studies projected, especially where children in their fresh growth and beauty are concerned, the conditions are altered, and what in one case may be undesirable, in the other becomes welcome, or is adopted of set purpose.

THE RECOVERY OF PLATINUM RESIDUES.

THE increased price of platinum, and consequently of platinum paper, has one mildly compensating advantage. It should lead the photographer to collect the precious metal which finds its way into the developing solution employed in the platinum process, and that which is also recoverable from trimmings of undeveloped prints and even from waste prints. The return for the attention to this point of economy is more than it was a year or two ago, before the rise in the price of platinum. We have in our possession a platinum crucible weighing thirty-six grams, or considerably over one ounce, for which in our student days we paid the sum of $5.50, yet we now see every week in *The Chemical News* the advertisement of a firm of refiners of precious metals who will purchase scrap platinum at the rate of $32.50 per ounce, and refined platinum, we are told, has to be bought at the rate of $42.50 per ounce. Hence the value recoverable from old developing solutions becomes much greater for a given bulk than has hitherto been the case, and the return which the careful photographer can obtain in this way may be placed as a small set-off against the enhanced price which he has to pay for his sensitive platinum paper. The methods, therefore, which should be followed in depositing the precious metal and bringing it into the state for the refiner to deal with are of considerable interest, and it may be advisable for us to recapitulate the routine which may be employed, although it is, of course, familiar to those who have made a practice of platinum recovery.

The impedimenta required are not numerous—a two-gallon glass or earthenware jar (a good-sized pickle-jar will do), some zinc, and some spirits of salt, *i.e.*, commercial hydrochloric acid. The manipulation needed for the deposition of the metal is not beyond the powers of those entirely ignorant of chemical operations. Some strips of zinc are placed in the jar and covered with water. A little spirits of salt is then added until the zinc throws off bubbles of gas. The exhausted developer is now thrown in and allowed to stand for about twenty-four hours, in the course of which time a dirty, chalk-like deposit will accumulate at the bottom of the jar, leaving the liquid above it clear and colorless. We will refer to the cause of this change directly, but will now confine ourselves to the practical execution of the process. The clear liquid is poured off—it contains no platinum—and a fresh lot of developer thrown in on the next occasion that an exhausted solution is ready. The whitish mud will not come to any harm in the meantime. The process of reduction goes on while the zinc is being acted upon by the acid, and therefore if the bubbles cease after a fresh batch of developer has been added some further acid should be poured into the mixture. If this does not cause the desired effervescence, it will probably be found that

the zinc has been entirely exhausted and needs replenishment in the jar.

The essential part of this process is the reduction of the platinum salt by the nascent hydrogen, which is produced as a result of the action of the acid upon the zinc. At the same time a good deal of the iron salt in the developer is reduced to the ferrous state and precipitated as ferrous oxalate. The acid only plays the part of a supply of this nascent hydrogen, and therefore any commercial acid, such as sulphuric, will answer the purpose. Spirits of salt is as cheap and satisfactory as any. Nitric acid, on account of its different character and oxidizing properties, cannot be used. When a sufficient amount of the residue has accumulated the sludge is drawn off, drained from as much water as possible on a linen cloth, and packed for the refiners.

The process of recovering the metal from the clippings of the paper or from trimmings of finished prints is quite different, and the two different kinds of residue should not be mixed, inasmuch as the method employed by the refiner to extract the platinum is different in the two cases, and the mixture of the two would add to the expense of the extraction. The clippings of undeveloped and waste prints are burnt to an ash by setting fire to them in a chamber where there is no great draught, a precaution which is necessary to prevent loss of the particles of reduced metal. A good receptacle for the prints is an old biscuit-tin in which a row of holes has been made about half-way up. The clippings are placed loosely in the tin and allowed to burn to an ash as completely as possible. The residue obtained in this way is then transferred to a bottle and added to from time to time as fresh batches of paper are treated. There is no objection to the accumulation of the paper and clippings themselves, if room can be spared, and the refiner will as soon treat the latter as the ash obtained in way above described; but the bulk of the paper is usually an objection, especially if the residues have to be expressed to the refiner.

The above hints, it may be mentioned, apply equally to the sepia variety of platinum, and also to prints of any age. It is best to send the residues once a year to the refiner in the case of a large user, and once every two years in the case of a small consumption of the paper. Much of the disappointment which is expressed as to the return in money from residues sent to be extracted might be prevented by bearing in mind the fact that the cost of treating a small batch is very little less than that for a large one.—*British Journal of Photography.*

SHARP PRINTS THROUGH GLASS.

BY J. PEAT MILLAR.

Most of us have at times found it necessary to make a print reversed, as regards right and left. Perhaps our negative was made reversed, for convenience in carbon printing, and a print was wanted on some glossy papers for reproduction or other purpose.

Had our negative been on a film we would only require to place it in the printing-frame upside down, the thickness of the film making little or no difference. But with a glass plate under ordinary circumstances we cannot get a sharp enough print through the glass, and we may have been forced to make a new negative for the sake of one or two prints. Now there is no need to make new negatives if one knows how

to get a sharp print through the glass side, and this is quite simple. All you have to do is to expose a piece of bromide paper behind the negative to the rays of light coming *through a lens*. That is all; try it and see. Bromide paper does quite well for reproduction purposes, and it is wonderful how sharp you can get the result.

The method of working is this: If you have an enlarging apparatus that projects the image, take out all carriers and get a clear disc of light on the enlarging easel. This is where you expose. Place your negative with the glass side up in an ordinary printing-frame; place a piece of bromide paper on the glass side of the negative; close the frame. With the yellow cap on the lens you can see to put the frame in the centre of the circle of light. When quite steady, remove the yellow cap and give the same exposure as if you were enlarging. Develop as usual, and the result will surprise you. There will be a slight softening of hard lines, but so very slight as to be hardly noticeable.

Exposing in this manner, the slight softening that takes place softens down any retouching that may be on a portrait. Those who are learning retouching often wish that this work would not show quite so much, and even the best of us have often a trying time over a face that is badly freckled, and all kind of dodges are resorted to for the purpose of hiding the pencil work. By printing with bromide paper, as described above, the retouching is very much softened. The negative need not be reversed—you can print it the right way about—only put between your negative and paper one or more thicknesses of glass, according to the amount of softening required. One sheet of glass does not make much difference; two are better; even three can sometimes be used if the work is coarse and requires a lot of softening. Of course you will understand that all this work must be done in the dark-room just as if you were enlarging, and any kind of light will do, daylight or lamplight, whatever you are in the habit of enlarging with.

Those who have not an enlarging lantern can get the same result by exposing in the camera, with the lens pointing to the sky, and using the dark slide as a printing frame, but must take care to have the negative and paper (while in the dark slide) in contact. An alternative method, which is available at night and for those who have no enlarging apparatus, is to print by a distant lamp (or magnesium ribbon) so shielded that the light falls direct on the print, from a motionless flame, and not from a large reflector or a ribbon that changes its position while burning.—*Photographic Monthly.*

AMERICAN PHOTOGRAPHS IN LONDON.

[THE following appreciative notice from the pen of Mr. A. J. Anderson appears in the *Amateur Photographer* and is interesting as showing how the American worker impresses his English cousins.—ED.]

If, as I take it, the exhibition of modern photography at 67A New Bond Street is an attempt to interest the artistic world in modern pictorial photography, the originators have done well to include Demachy and Craig-Annan amongst the seven exhibitors; but, from a photographic standpoint, the exhibition would have been more harmonious if it had been confined to American work. Even when hung on separate panels, Annan's photographs do not harmonize

with the American work any more than the paintings of Gainsborough would harmonize with those of the French impressionists.

The point which strikes us most forcibly, when viewing the magnificent collection of American work at this exhibition, is the essential difference of European and American photography; and this difference is not a mere difference of method or mannerism, but an entire difference of principle. European photographers treat pictorial photography as though it were a new method of art expression, and, carrying on the conventions of pictorial art, use their technical skill to present their subjects in a manner which is not dissimilar from that which they would have employed with brush and pencil. American photographers, on the other hand, treat pictorial photography as a new departure, as distinct from the old forms of art expression as the paintings of the Renaissance were from the sculpture of Phidias; they treat it as a new scientific art which is at present still in an experimental state, but which eventually may achieve results far surpassing anything that could be attained by the hand-wielded brush. To the American, each photograph is an experiment, each success a step further in the new science-art.

This, I think, accounts for the novelty and force of the American work, which, though presenting subjects in a new and delightful manner, still retains its photographic character. It also, I think, accounts for the obvious photographic faults shown in some of the American pictures.

But is not the American, in his devotion to his principles, rather in danger of becoming a slave to his media? Is he not in danger of learning to see with a photographic eye? Take Coburn's "Spider Threads," for instance. I know that I have never seen water reflections as he has depicted them—black, clear-cut, fossilized, as though the mast and rigging were reflected from a surface of corrugated steel. Why could he not have given some of the movement to the water that he has given to the traffic on "London Bridge"? Again, in "El Torso," delightful in its sunshine and simplicity, are not the shadows round the arena too inky black and devoid of all reflected light? Surely this is as the camera would see it, not as the eye would.

Again, in Baron de Meyer's portrait of Baroness de Meyer (119), is not the shadow under the hat photographic and devoid of all depth and luminosity; and ought it to have been passed over even for the sake of the graceful lines of the falling drapery? And in his beautiful conquest of sunshine, Portrait Study (120), ought he to have been content to present the side of the face disfigured by an ugly broad line of white halation, or ought he to have persevered until he conquered the halation as well as the sunshine? And with Mrs. Käsebier's portrait of Mrs. Mott, can the human eye reconcile the soft half-tones of the face with the inky interior in which she was photographed?

As an offset to the rendering of strong contrasts, which the Americans do not appear to have as yet mastered, their rendering of light is altogether new and attractive.

What painter, for instance, could have equalled the shimmering, radiating light in Mrs. Käsebier's "Crystal Gazer,' and the beautiful play of light in "The Manger?" or what painter could have depicted the clearness of glass and water as Baron Meyer has depicted it in 105 and 112? Surely this is a direction in which the new and scientific art will excel.

Mr. Coburn's work is well known to most of us, and the examples hung at this exhibition cannot but add to his

reputation. Whether one is basking in the sunshine, so admirably depicted in "Assisi" and "Tangier," or listening to the roar of traffic, which one can hear as well as see in his picture of "London Bridge," one must own that the strong, convincing photographs of Alvin Langdon Coburn plead in their frank photography for belief in the American theory of the science-art.

The Käsebier collection is probably the best collection of Mrs. Käsebier's prints that has been placed before the public; and if you would appreciate Mrs. Käsebier at her true value, you would do well to compare her portrait of Kubelik—the ordinary thing done in the ordinary way—with the professional portraiture you will see as you pass down Bond Street.

But one will find the most notable collection in the whole show on the right hand as one passes out. Baron A. de Meyer is a man who, if he can only go on as he has commenced, will make a big mark in the world of photography. His portraits are good, and, with the exception of No. 118, which is somewhat crude and unfinished, full of light and sunshine. His pictures of still-life—whether of water and glass, or bronze, or flowers—are a revelation of the artistic possibilities of such subjects. And his work, combined with that of Coburn, must make many converts to the theory of the American school.

THE MINIATURE.

In the miniature we have one of the strongest proofs of the art status of some photographers. Many miniatures have been made which might be described as completely satisfying. The growing popularity of the miniature portrait is one of the most hopeful signs in current professional photography. We would like to persuade photographers to make more miniatures, to "take them up" and make a specialty of them for high-class business. There is no form of portraiture more beautiful to the cultivated eye; no style which so well displays the possibilities of photography and the skill of the portraitist. It is the most difficult form of portraiture also, and he who masters it may rest assured that he has won no mean degree of proficiency in his profession. All of which reasons are urged upon those who desire to improve themselves and their conditions.

A miniature portrait is simply a very complete likeness gotten within a small space. Its beauty depends upon its completeness; the wealth and delicacy of detail which it offers; its clearness and *finesse* of definition; its modelling and arrangement of line and light and shade, revealing the best parts of the subject in the most attractive way.

When we look at a miniature portrait we note two things in particular: First, that the average portrait is fearfully crude as an exhibit of the capabilities of photography; and, secondly, that the miniature portrait, properly made, is an altogether desirable specialty for the better class of the photographer's patrons. It appeals especially to women and is peculiarly adapted for the display of the daintiness and grace and softness of character which belong to womanhood and childhood.

It lends itself to a rich variety of forms, circular, oval, rectangular, etc., and is equally effective in the very small sizes for personal wear and in the larger sizes for wall display. It opens up a field for the sale of frames, from which the photographer can derive a fairly large

and legitimate profit; and it is a style which may confidently be expected to bring larger orders than the usual cabinet or panel. It may be made to fit almost any purse, from the modest glossy print, selling at a dollar, to the more expensive carbon on ivory.

We have seen miniature portraits, each possessing its own peculiar attractiveness, on albumen and similar glossy papers; in platinotype, black and sepia; and in carbon on various supports, as paper, opal, celluloid, ivory; on watch-dials and brooches, on watch-cases and chinaware.

The miniature portrait calls for skill in its making. It is the refinement of portraiture, and the average photographer who sets out to make a miniature will find himself going to school again. The picture comes within the capacity of the eye; we see it as a whole in a single glance. Its lines and masses, its beauties and defects, are so obvious that unless the beauties outnumber the defects we are at once dissatisfied. Hence the photographer who makes a specialty of miniatures learns to weigh his work more carefully and to think as he works. It teaches him, first of all, that most valuable of lessons in picture-making: how the bounding lines of the picture space influence what they inclose, and the relation of different parts of a picture, the influence of tones in harmony and opposition, etc. He learns also the value of *minutiæ* in the obtaining of expression: how the smallest change in the direction of the body, the eyes, the poise of the head, the dressing of the hair and the disposition of the bust alter and change the expression.

SAMUEL SARTAIN; IN MEMORIAM.

In the death of Mr. Samuel Sartain, which took place some few weeks ago, at his home in Philadelphia, this magazine loses its oldest, most loyal, and one of its most appreciative supporters. Beginning with the first number, in 1864, Mr. Sartain was a lifelong subscriber, and though a very busy man he always found time, when renewing his subscription, to write a few words of thanks, appreciation, and encouragement. One of the early amateurs in photography, he maintained an active interest in the art up to the time of his death, being Vice-President of the Photographic Society of Philadelphia.

Samuel Sartain was born in Philadelphia, in 1830. He was the eldest son of John Sartain, the eminent engraver, and grandson of John Swaine, of London, also an engraver.

At an early date he began the study of art and engraving on steel under his father and in the schools of the Pennsylvania Academy of the Fine Arts; before he was seventeen years old he engraved a fine portrait of Benjamin West, which elicited very flattering commendation from several of the Philadelphia papers.

In 1854, he was selected by the Art Union of Philadelphia to engrave their presentation print of "Clear the Track," after a painting by Schussele, which became very popular; this was followed at intervals by other large prints for framing purposes which had very extensive sales.

In 1874, he engraved by entirely new processes a copy of one of Professor Langley's remarkable drawings of a typical sun-spot. It was originally published in the *Journal of the Franklin Institute*, and drew forth the highest praise of the scientific journals. It has since been reprinted for several foreign as well as American publications.

For a number of years his time was mainly devoted to fine portraits on steel, engraved in the most careful manner in a combination of line, stipple, and mezzotint methods. He had considerable mechanical ingenuity which enabled him to devise various mechanical aids to his work, giving a superiority in the peculiar grain he obtained in the mezzotint portion of his work.

He held important offices in the Artists' Fund Society and other art associations, and was also honored in the same way by the Franklin Institute, the representative scientific body of Philadelphia—his tastes leading him in both artistic and mechanical directions.

He received silver medals for work at competitive exhibitions on two occasions, and other similar public recognitions of his ability.

TRADE NOTES.

ROYAL Velox is the name of the latest addition to the Velox family, and judging by the prints we have before us it is "Royal" in more than name. Coated on a rich and delicate cream-colored stock, the prints have a warmth and beauty of tone (especially so with the prints that have been toned with the Velox re-developer) comparable with the delicacy and feeling of a rare old etching. That such results can be obtained in the ordinary simple Velox manner will make Royal Velox a very popular paper. Try some with the re-developer; we are sure you will be more than pleased with the results.

THE Bissell Colleges of Photography and Photo-engraving form the subject-matter of a handsome sixty-five page cataloguue, giving full and minute detail on how, when, and where you can take a complete course in photography and photo-engraving. The colleges are complete in every respect. Photographers contemplating a course in photo-engraving should write for a copy of this catalogue to Bissell College of Photo-engraving, Effingham, Ills.

A CATALOGUE OF COOKE LENSES is the title of an attractively printed booklet describing the well-known "Cooke" lenses. The get-up is attractive and the numerous testimonials scattered throughout its pages should convince the most skeptical. A copy can be had from Taylor, Taylor and Hobson, Ltd., New York.

FLASHLIGHT POWDERS vary greatly in their actinic-light producing qualities. Jas. H. Smith, of 306 E. Forty-first Street, Chicago, has just issued a photo-meter test of some of the brands of powders on the market, which he will be glad to mail to anyone interested in flashlight work on receipt of a two-cent stamp.

THE HALOID CO., of Rochester, N. Y., make some strong claims for the superiority of their Platina Developing Paper in the advertising section of this issue. Photographers interested in development printing papers—and few are not—should investigate for themselves.

THE ROUGH AND CALDWELL CO., announce that they have moved into the old Seavey Studio, Walton Ave., and Cheever Place, New York, where with greatly increased facilities of every kind they are in a position to furnish their well-known high-grade backgrounds from stock designs. Sketches and estimates furnished for special designs. A new supplementary catalogue will be mailed to any photographer upon request.

THE HAMMER DRY PLATE CO., after recent experiments and improvements, claim that their "Extra Fast" and "Special" plates (red label) solve the problem of shortest exposure with longest quality. Judging by the good qualities of some snow pictures, sent us recently, from negatives on Hammer plates the claim for speed and quality is fully justified.

WET-PLATE PHOTOGRAPHY. The increasing number of letters received in this office weekly asking for information on the wet-collodion process indicates that in many branches of commercial photography, apart from photo-engraving, the use of the wet-plate process is steadily increasing. Excepting a small elementary book written primarily for the amateur Wilson's *Photographics* is the only book in the language that gives a thorough description and a practical method of working this process, its difficulties and ways of overcoming them. Though a high-priced book ($4), the information on this process alone is worth many times its price to those who have occasion to work it.

ARISTO SCHOOL OF PHOTOGRAPHY. We are asked to state that the Aristo Company will hold one of their famous schools under the auspices of George Murphy Inc., at 57 East Ninth St., New York, on April 2, 3, and 4. Program and full particulars can be obtained from George Murphy Inc.

EDITOR'S TABLE.

JUDGING by the number of letters we have received lately, President Falk's appeal to photographers to bestir themselves in the matter of the new copyright law has been very largely responded to. This is, of course, as it should be. The photographer has an equal right to the fruits of his labor with the painter, the writer, or the musician; but so often it happens that what is everybody's business is nobody's business. Many of our correspondents enclosed their Senators' and Representatives' replies, which show that at least some of our lawmakers appreciate the fact that the photographer cannot be treated as a negligible quantity.

THE Metropolitan Museum of Art, New York, has just placed on exhibition two portraits by Franz Hals, loaned by Mr. J. P. Morgan. They are portraits of a man and woman, seated, three-quarter length. Of all art treasures brought to America few are more precious than these magnificent pictures. For characterization and technical skill Hals is justly ranked among the greatest masters, and it would be difficult to find among all his pictures any that can convey more lessons to the portrait photographer than these works. Every photographer visiting New York and failing to see these pictures is missing a great opportunity. It would repay any photographer to make a special trip for the purpose.

Apropos of the above paragraph, there was a remark in the *Bulletin* of the Museum announcing the acquisition of the new pictures that has special significance for the photographer. Describing the portrait of the lady, the writer went on to say: "Her seriousness and self-satisfaction have been brought out by the artist in a good-natured and amused manner. These qualities are distinctly shown in the face and attitude *and by the hands as much as anything else.*" When you come to think of it, how often does the photographer make use of the hands of his sitter; and why is it that such adjuncts to the delineation of character are so much neglected?

WE have just received from our old friend, O. Pierre Havens, of Jacksonville, Fla., a clever genré picture of a child with a hen and chickens. The composition and manipulation of background —the picture was made under the skylight— reflect much credit upon Mr. Havens. It is a picture that should find a quick sale at the art stores.

FROM far-away New Zealand we have the following appreciative letter from a new subscriber: "Since last winter I have moved from a small village to a studio right in the centre of the town (Greymonth), to a good studio in a new building, and I owe no inconsiderable part of my photographic knowledge to your valuable journal. I consider it a boon to a struggling worker, like myself, as it brings him in touch with the latest and the best from your best men."

Mr. F. B. Clench, of Madison, Ga., who by the way has been a steady subscriber to the magazine since the first number appeared in 1864, sends us three charming children's pictures. They are clever child studies, and we will have pleasure in reproducing them in our next issue.

The Business Life; or, Straight Talks on Business. By WILLIAM GAMBLE. Published by Sir Isaac Pitman, Ltd., London. Price, twenty-five cents. Mr. Gamble, known to the photographic profession as Editor of *Penrose Pictorial Annual*, has written a series of "straight talks" on the right conduct of business. He has studied the question on both sides of the Atlantic and knows whereof he writes.

Fotografisk Tidskrift is the name of a new photographic journal, the only one published in Swedish; is the official organ of the leading Scandinavian photographic societies. Among its editors we notice the name of our old friend, Ferd. Flodin, late of Minneapolis and now one of the leading professional photographers of Stockholm, Sweden.

The Photo-Miniature No. 77, just issued by Tennant and Ward, New York, is devoted to "Focal-plane Photography." This is the first American book on the focal-plane shutter and treats the subject in a very thorough and practical manner. There are chapters devoted to the advantages of the focal-plane shutter; its efficiency; its application; methods for calculating exposure; testing; and the development of extra-rapid plates, made necessary by the high efficiency of this form of shutter.

This little book makes its appearance at an opportune moment, for the focal-plane shutter is rapidly coming to the front. In so many branches of photography it is an absolute necessity. Its efficiency appeals not only to the amateur photographer in search of snap-shot subjects, the professional photographer needs it even more for his commercial and out door work; not being on pleasure bent he cannot afford to take any chances on his exposures. His equipment is not complete without a focal-plane shutter and a knowledge of its possibilities.

The Moving Picture World and View Photographer, a journal devoted to the interests of manufacturers and operators of moving pictures, etc., will shortly make its appearance under the able Editorship of Mr. Alfred H. Saunders, late of *Views and Films*. The moving picture has firmly established itself as a popular form of entertainment and instruction.

By Hollinger, New York

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

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THE SINGLE PRINT OR THE BAKER'S DOZEN.

WE have never been able to understand the true inwardness of the number twelve. Why is it that we buy our rolls and eggs, pencils and portraits by the dozen? Will the negative only give off a dozen prints or has the sitter only a dozen friends and relatives?

Talking with a well-known Fifth Avenue photographer on the subject of the average portrait, he said: "I put into every portrait I make the best effort I am capable of; I have to, for all my work is sold on its merits—not by the dozen, but by the print."

What does this mean to the photographer and his patron? The photographer, not having had the word passed up from the receptionist, that "the party wants a dozen 5 x 7 platinums," proceeds to make the best possible negatives he can of his subject. His judgment will guide him in the matter of size and number of plates to expose. Several negatives of different sizes and poses are printed from, and the customer is invited to take as many as he wishes or as few —the price for the first print from each negative being somewhat higher than that for reproductions.

Assuming that the portraits are good, customers will invariably take more if they know that they can order them in twos, threes, or fours, just as they need them, gauging their inclination by the condition of their pocket-book.

Of course this method could not be adopted with advantage to every gallery, but there are many galleries where a change from the dozen idea to the single print would result in much better work for much better pay. A more or less extension of this idea would very soon begin to elevate photography in the public estimation. There is under present conditions a too close relationship between the tintype "artist," who makes ping-pongs at twenty-five cents a dozen on the Bowery, and the Fifth Avenue "society" photographer, who "for this month only" will make platinum cabinets for six dollars per dozen.

Portrait photography has for too long been bound and held down by a too narrow conventionalism, too much imitation, and too little originality. The most successful men, artistically and financially, are the men who broke away from the old-fashioned and worn-out methods into new and original lines, like Core, "the children's photographer"; MacDonald, "men only"; Hollinger, "the single print"; Pierce, "home portraiture"; Falk, "celebrities"; to mention but a few of them.

THE NECESSITY FOR PURE CHEMICALS IN PHOTOGRAPHY.

BY A. J. JARMAN.

In the conduct of any business where skilled labor is employed and the main object being to excel, it will always be found that the best of material must be used, although the cost of the material may often be high.

In one important branch of photography, viz., photo-engraving, it is a necessity that any chemical used should be of the highest purity. It is well known that in making up the enamel for the burning-in process upon copper, and the sensitive albumen solution for zinc printing, that the bichromate of ammonia must be of the finest description, and the albumen used should be from new-laid eggs; if the eggs are at all stale the sensitive mixture is useless.

Only a few years ago common washing soda was recommended in developing formulas, the results being constantly variable. Common washing soda is always very variable in composition. Under ordinary conditions every thirteen pounds of washing soda should contain three pounds of carbonate of soda and ten pounds of water of crystallization, but this is not always the case; there is oftentimes a large quantity of soda ash, as it is termed, which is nothing more than crude carbonate of soda, which is highly injurious when forming a part of the developing solution, causing fog all over the plate, or with bromide paper a gray veil is produced over the whites of the picture. Sulphite of soda, too, should be well looked after, for this is readily converted into *sulphate* of soda upon exposure to the air, and in some districts where the atmosphere is heavily charged with carbonic acid gas, both washing soda and the sulphite are partly converted into *bicarbonate* of soda. In either case this impurity is highly conducive to the production of fog. Both sulphite of soda and the carbonate should be well protected from the action of the atmosphere previous to use. Only too often this simple precaution is not attended to, the consequent result being a continued veiling all over the negative. The quality of the plate is at once considered defective.

When the wet collodion process was in universal use for everyday portraiture the use of triple crystallized nitrate of silver was a necessity. By the use of a chemical of such high purity the best of negatives could be made. Now that the gelatine dry plate has become universal it is just as necessary to pay attention to the purity of the developing agents to secure the finest quality possible in the resultant negative.

By the use of chemicals that contain various impurities, no matter what those impurities may be, the negatives produced are sure to be of a thin and weak nature, which after-intensification does not improve, only to a very slight extent; consequently every print suffers in quality entirely through the use of some chemical in the developer that cost only a few cents per pound less than the pure article. Competition in the manufacture of chemicals for photographic purposes for some years past has done a great deal to keep the purity to a high standard.

The consumption of hyposulphite of soda has increased enormously of late years. Every cask of hypo should be tested when first opened by making up a small quantity of solution and

testing with blue litmus paper. If after a few minutes the test paper turns only faintly red it will indicate an acid condition. To correct this a twenty per cent. solution of carbonate of soda should be made up and a few drops added to the hypo solution. This will correct any tendency to acidity. A weak solution of ammonia is sometimes used for the purpose. The use of this chemical is too risky, because of the caustic nature of this body, which will be sure to affect the color of the print, giving a tendency to a foxy brown after the print has dried.

One chemical that is very largely used at the present day is the chloroplatinite of potassium, represented by the symbols K_2PtCl_4, which should contain 47.2 per cent. of the metal platinum. This salt sometimes contains too much chloride of potassium, this being a compound salt made up of the protochloride of platinum and chloride of potassium, the latter being an extremely cheap salt. If this salt is only of a light-red color, bordering upon orange, then it contains too much of the latter salt. Where it presents a deep blood-red color and the crystals are well formed it can be accepted as the true salt. When this salt is dissolved the water should be hot; this ensures perfect solution, as it is only sparingly soluble in cold water. When chloroplatinite of potassium is of the purest kind, many more prints can be toned with it because of its correct quantity of platinum. Although inferior qualities may be offered at a lower price, the amount of toning cannot be carried out that can be done with the pure article.

These remarks also apply to chloride of gold, which today is rarely found to be adulterated. If this chemical possesses any other salt it is generally sold under a correct name, such as chloride of gold and sodium, at a less price per ounce.

This compound salt, being an excellent one when made right for toning purposes, is preferred by many well-experienced photographers to the use of the pure chloride of gold, although it is difficult to conceive how the compound salt can answer better than the pure article in the line of gold toning. Practice alone with special toning solutions may have much to do in the production of pictures of a fine quality with the sodium-gold chloride, as it so often has to do with other practical points in the art of photography.

The use of impure bichromate of potash in making up the sensitizing solution for carbon tissue is very remarkable. The writer can call to mind a case where a considerable quantity of carbon tissue had been prepared in which a fresh sample of bichromate of potash had been employed to make up the sensitizing solution. Every care had been taken in the preparation and the tissue dried as usual in a room where thousands of square feet of tissue had been dried before. A small quantity only had been used upon the first day. A number of prints were made the second day, when upon trying to develop several large prints they turned out to be insoluble. Other prints were tried with the same result. All efforts to locate the cause were found to be useless, until a new sensitizing solution was made from another sample of bichromate of potash. The result was that the tissue that was sensitized, some being from the same rolls as before, turned out perfect prints, and possessed the same keeping qualities as hitherto. Upon testing it was found that the bichromate was at fault; the material had been supplied from stock intended for electrical use, for the making up of battery solutions. For this latter purpose it presented no fault at all, but when employed as a sensitizer for carbon printing it was

practically useless, causing a loss in good tissue, as well as time and labor. There can be no doubt that upon many occasions failure has been the result entirely through the use of impure bichromate of potash, the consequence being that the photographer who made a trial of carbon printing, not having succeeded, at once gave up any further trials because of his first non-success.

The use of bichromate of ammonia has been advocated by some workers. Of course this salt answers the purpose; the cost, however, is very high compared with pure bichromate of potash, at the same time giving no advantage. Pure bichromate of potash will cost about ten cents a pound more than the common article, and is capable of producing results more than ten times better than can be obtained with the common bichromate.

The use of sodium bichromate has been employed in carbon tissue sensitizing. There is, however, no advantage in its use over the pure potassium bichromate.

In the preparation of developers made with pyrogallic acid, it is well known that some makes of this chemical are superior to all others. To such an extent does this show itself that the developing power of some makes is quite 50 per cent. better, the quality of the developed image being superior in every particular. Although the price of pyrogallic acid varies with different makes, there should be no hesitation in paying a higher price for the best article.

There is not only economy in this, the good quality of the negatives produced will more than compensate for the small increase of first cost. Be sure in the first place that the chemicals are pure; then if there is a fault at all, it will be more easily located and rectified, and the resultant work will be both successful and satisfactory.

MODERN METHODS OF PHOTOGRAPHIC MOUNTING.*

BY HECTOR MC LEAN.

ALTHOUGH in the remarks which follow I have mainly in mind the requirements of the ordinary amateur who occasionally wishes to show his prints in public exhibitions, to hang them on his walls, or to send them in to competitions, some of my observations will, I venture to think, be not unhelpful to those professionals who realize that they may at times do better than abandon their prints to the tender mercies of the "stock" mount.

I also confine myself mainly to prints whose size and character do not demand the employment of close framing. I cannot do better to commence with than remind you of Alfred Stevens's well-known dictum: "A picture, like a pretty woman, needs adornment." The next reminder is that all present methods have been derived from previous ones. The most prevalent theory of photographic mounting was at one time what may be termed the "hole-in-the-wall" one. According to this, the beholder was supposed to regard the print as being seen through a rectangular or other shaped opening in a wall. This idea was in harmony with the "hold-the-mirror-up-to-Nature" notion of what was formerly considered first-class photography. But to-day the trend of opinion

*A paper read before the Sutton Photographic Club.

is to treat the mount as part and parcel of a decorative unit, of which the chief feature is the photograph. Before coming to some general principles which are more or less universally accepted by those who know, let me interpolate that when I first began amateur photography there were two maxims almost universally accepted:

1. That the four margins should be equal.

2. That an India tint plate-sunk mount should be used.

Both these canons are now considered to be anathema—the mark of the ignorant.

If you want to be modern—in touch with all that is most assertive—you must, above all things, avoid the centre of a mount. If you want to indicate that you are not ignorant of the elementary principles of æstheticism, beware of using the India tint and the plate mark for photography. They are both in the nature of shams, and are, therefore, odious to all cultivated people. The plate mark is the product of printing an etched or engraved plate upon plate paper. Obviously it is a meretricious pretense to mount a photograph, which is essentially not produced by pressure, as if it were a line, mezzotint, or stipple engraving. For a similar reason the "India tint," which is associated with an engraving, becomes a fraudulent incongruity if used round a photograph.

After a while the India tint mount gave way to the plain white, the cream color, or the "neutral" tint mount. These, although fairly "safe," were considered bare and bald. Besides which, a fashion set in for "all dark" prints—pictures in which the lights were in inverse ratio to what the ordinary observer would picture as natural. At this period the mount almost completely disappeared—at least, from exhibition work—prints being, framed close, often in depressingly heavy dead-black mouldings.

Healthy Variety.

Against this funereal fancy we are now enjoying an acceptable reaction. Moreover, to a large extent, leading amateurs now display a liberty of action which indicates that they do not, as of yore, mount their prints entirely according to the prescription of the moment, but employ taste and knowledge to do their best for each individual picture.

That this is a wise practice no one can gainsay, when it is remembered that the photographic print varies almost without limit as regards the vigor of its rendering and the color of its image.

We can all obviously realize that a red-brown P.O.P., a black platinotype, and a sea-green carbon each ask for a different treatment as regards mount. Those who are adepts at mounting are able to distinguish just as clearly what are the precise shades of tinted papers which each particular brown, or black, or green, or red demands. For instance, there are possibly as many as twenty distinguishable browns in common use for photo-printing purposes. If it is required to fit these with surrounds which shall be absolutely harmonious, not one nor two, but maybe a dozen different tints of brown paper will be called for. The color sense is, however, not so highly developed in most people as to make it possible for them to thus ring the changes.

But many will be well able to discriminate between such differences as the "plummy" brown often met with in gold-toned matt silver papers, the Vandyke-brown seen in the carbon, and in some measure in the "Japine" paper, and the sepia-like brown which carbon and toned bromide papers at times exhibit. In so far as one can distinguish between one print and another, so may one hope to be sufficiently color-sensitive as to make a harmonious selection of mount to go with the print. Here let

me interpolate two maxims which will at least prevent the tyro from making serious blunders:

1. The mount should be neither as dark as the print's deepest shadow nor as light as its chief high light.

2. The scale of contrast between one part of a mount and another, or between mount and frame, should be less than that which exists in the print.

EXCEPTION.—In case of some undesirable violence of black and white in a print, an excess of similar contrast between the frame and mount may be serviceable in diminishing the harshness of the print.

Harmony or Contrast.

Speaking broadly, there are two courses open in all mounting schemes—viz., to choose a surround which, as regards color, forms with the print a harmony or a contrast.

A complete contrast is that afforded by the juxtaposition of complementary colors. For instance, a ruddy-brown print surrounded by a cool green would be a case in point. Obviously, the occasions when a direct contrast will be desirable are likely to be few and far between. It is then in the direction of harmony that we must turn for a satisfactory scheme of mounting.

An attribute of good mounting which should always be borne in mind is that the beholder should not be so much struck by the mount that it is found to be more attractive than the print. Indeed, it is a sound maxim that the system employed should be so unobtrusive that one should not be able to remember what the mounting was like. This I have more than once found to be a reliable test to apply to the question. For instance, I recently wanted to refer to the method adopted by that talented amateur, Mr. Alvin L. Coburn, but although I had several times studied his prints at the Royal Photographic Society and at the Salon for journalistic purposes, I could not for the life of me remember what he had used, beyond that his works were hung *en passe partout.* On subsequently taking special notice of those at the Salon, I found that he used a sober neutral tinted paper having a tonal value about half-way between the high lights and shadows of his prints, with a binding strip but very slightly darker. There was little or nothing to catch the eye and distract attention from the print, and, by the same mark, there was nothing to fix the pattern, color, or depth of the mount in one's memory.

American Mounting.

So far most of my remarks have had reference to what may be termed plain or single mounting. During the past few years ornamental or multiple mounting has become very popular. The employment of multiple mounting has, so far as photography is concerned, been ascribed to the Americans. Although they did not exactly invent it, they seem to have had a chief share in bringing it into notice or favor.

Multiple mounting consists in framing two or more sheets of variously tinted paper of different sizes one on the top of the other, so that they show two or more margins of different tints surrounding the print. These margins may vary from 1-16 inch—in which case they may be termed lines—to any width that the mount will allow. As may be imagined, they permit a great play for fancy and for taste, for which reason the multiple mounting system is favored by the æsthetically gifted and disliked by those who feel that it only opens the way to them for a series of blunders.

If I were not addressing an audience highly endowed with decorative instinct I should advise them to give multiple mounting a wide berth. But as it is, inasmuch as this method not only at times helps the effectiveness of the print,

but also indicates the cultured taste of the amateur, it is certainly worth while to give careful attention to this refinement of mounting.

The Choice of Tints.

As regards the tints and surfaces of the paper employed in mounting, I can only spare time for a few words.

As a general rule, the choice of paper will, or should, be governed by the color of the high-lights of a print, although in some cases it is necessary to give first consideration to the half-tones and shadows. For instance in mounting a print made upon cream-tinted paper it is well that the mount should contain some proportion of such a tint rather than consist of a cold blue-white or a cold gray tint. On the other hand, a pure black-and-white print—such as an amidol-developed bromide on snow-white paper—will, as a rule, not be well served by being pasted upon a cream-tinted mount.

In the not uncommon case of a brown print upon white paper, it will usually be found that a brown-hued mount which is considerably lighter and cooler in tint than the lighter shadows of the print will be the best expedient. Some amateurs have a great fondness for color in their mounts; occasionally a tolerably bright-tinted mount, if there be not too much of it, may be advantageous, but its employment needs the taste of one whose color sense is almost infallible.

In this regard it is well to bear in mind that the larger the surface of the mount the less pronounced should be its color and its deviation from half-tone. Hence it is that it is permissible to use a fine white or black, or even bright red, green, blue, or other colored line surrounding and enclosing a print. Personally I do not care for the passing fancy of putting a line between the mount and the print, although there are at times sufficient reasons to warrant it.

Objectionable Shams.

I have already given my opinion about the impropriety of using a sham India-tint mount. Of late, a fashion has sprung up of printing upon sensitized thin cream India paper, or on what is much the same, viz., Japanese tissue, in such a way that there is left a clear margin, so that when the photograph is mounted on any suitable paper, it, as regards "tint," presents much the appearance of an engraving. To thus treat one's print cannot well be cavilled at. The "tint" is not a sham one, and, moreover, the print itself is impressed upon the tint; but when the amateur goes a step further, by so displaying such a print as to make it superficially imitate an old mezzotint or etching, it should have the strong disapproval of all who dislike deception. Let me explain what I mean. At an exhibition now open are several such prints, which have one edge badly jagged. This imitates the condition of a print which (1) has been torn from a book, or (2) has been mounted without trimming, as it came from the engraver's press. That is, I consider, bad enough. But it is worse still when this affectation is carried to the extent of mutilating part of the actual print, so that the impression may be conveyed that the modern photograph is an old, rare, and precious fragment of some fine etching. This is not art, but chicanery.

Mounting Materials and Apparatus.

Closely allied with the question of mounting is that of the employment of the passe-partout in place of the German —or other—moulding. Personally, I much like the passe-partout. It emancipates one from the frame-maker, saves the pocket, and permits of the exercise of considerable personal taste. Without dwelling upon the principles which should control this convenient way of

binding up print and mount, I should like to briefly refer to some few of the modern facilities for carrying out the practical work of mounting which are at our disposal.

As to mountant. First in my affection stands Higgins' "photo-mounter," which has never played me false. For a home-made article nothing beats a light starch jelly, but it only keeps a short while, and many people cannot make it properly. One of the greatest of boons recently introduced is without the shadow of a doubt the dry adhesive mounting system. Many of my photographic acquaintances who have adopted it speak most enthusiastically of it. Some people think that it must be difficult to manage. All I can say is that I procured one of the hot presses, and with only a printed slip of directions to guide me, straightaway dry-mounted a P.O.P.

An important matter in mounting is that of trimming a print. To carry out this, knives, cutters, cutting shapes, set squares, cutting boards, and similar contrivances without end are provided. I show a selection of such articles, which explain themselves. But what I now use, to the complete exclusion of all the above more or less troublesome odds and ends, is Merrett's trimming desk. I find it cuts prints more accurately, in about one-tenth the time needed when using the knife, etc. As regards paper on which to mount, I can say that those of you who are in dead earnest should do as many others before you have, viz., get from twenty to thirty or more sheets of paper of such various delicate tints and tones as are likely to best accord with your prints; then, when you are mounting a picture for exhibition or for the wall of your room, try by experiment what texture and what tint or tints will be most harmonious and effective. I can suggest no simpler course than this.—*British Journal of Photography.*

RECOGNITION.

BY W. F. OLIVER.

ONE may or may not believe in the manifestation of departed spirits; it requires no psychologist to perceive the spirit manifested by the living. The soul yearning of the photographer cries out, "What shall I do to be it?" Though, as it is written, we read: "What shall we do to be us?" Ever since the stone age, so vividly pictured by the Sunday art supplement, mankind has evinced its overwhelming desire for power, whether it be the power of brute force—political, financial, intellectual, or social supremacy, or the ascetic's struggle for mastery of self. When the position of supremacy is attained, oftentimes before, there comes a masterful cry for recognition. The laudability of one's ambition depends only on the nature of the power desired, the method adopted for its attainment may at times be questioned.

Along strictly commercial or economic lines there have always been open two legitimate avenues for the financial advancement and success of an individual, institution, or enterprise: To him who can perform that which no other has or can accomplish there comes the reward for his exclusive ability; to him who can accomplish the equal of another's results by superior methods, resulting in a saving of time, comes the reward for his

capacity. To the former class may be consigned the "art" side of photography: their accomplishments reign on account of their personal ability; their methods require no concealment, for in the hands of others they are without avail. To the latter class may be relegated the business or mechanical side of the craft; to them may be justly accorded the right to concealment of procedure or protection of the same which the Patent Office will grant. The first receives pay for his knowledge and ability, the second for his capacity and efficiency.

Is it not possible that some of the "triumphs of art" are such solely by comparison—because there is nothing better or even on an equality? Referring to the work of excavating the ruins of an ancient city, an article mentions some " . . . beautiful marbles and bronzes that may be destined to become classic." Why is time required to settle their destiny, unless it be for comparison?

The complaint is entered that photography is on an unsettled basis. Which, the science, the art, or the business,—it has not been definitely revealed. Why? No lucid answer. There is just the bare assertion that the time has come when photography or the photographer should command recognition. Could some one tell us just what has been done that failed to be appropriately recognized? Who did it? When and where? Could some one tell exactly what form of recognition justice demanded and exactly what or how much was wrongfully withheld? Are many who are doing business on a settled basis greatly agitated over photography's unsettled basis? Just what portion of one's settled business basis is most likely to be affected by the unsettled basis of the art? Most important of all: Could some one tell us exactly what could be settled by recognition? In the world of art, is there any such thing as statics except as they refer to completed works and not to the worker? One certainly reads quite often of works accomplished "when he was at his best," or "at the height of his career." Would it not be unfair to recognition if a life pension as well as a "Victoria Cross" should be demanded?

Quite possibly the above questions are so far-reaching and important that one hesitates and stands abashed—not without good reason. Most presumptuous would be anyone who ventured an opinion until he plied these and many other questions directly to himself. Such a course could result in naught but the greatest benefit, bereft of public self-humiliation or the confusion of another. What have you done? Did you ever send a picture to a convention? What for? Was it to find out your personal valuation or to gain recognition and its resulting financial advantage? What was the picture, an accident or a creation? If you were successful, which secured the coveted prize, the accidental or the created portion? On your return to business did you modestly advise your patronage that it was your good fortune to secure recognition, or boldy announce that your superior ability had at last been justly acknowledged? Did you display the winning picture as a sample; and if so, did you ever make another like it?

It may be that those who inaugurated the pictorial movement cynically ignored perfection of technique; it matters not. The time is long passed when the issue should be considered technical excellence versus pictorial excellence. If photography has attained any creditable elevation, there can be but one issue —technical excellence *and* pictorial excellence. Still we have with us those who, in substance, paraphrase "Mr. Dooley," and assert if it's art it isn't photography; if it is photography it isn't art; but all the time it is photography that pays the rent and pays the dividends. When, within a short period of time, one

hears from the same source of authority that education is the photographer's crying need, and that some, evidently suffering this need, have achieved great financial success because of a technical excellence which in the minds of the great majority of the people is more preferred than work made on pictorial lines, is it strange that issues are as confused as bases are unsettled?

The epigram, "The touchstone of legitimacy is success," seems more often applied to business than to art. The craft has been divided into pictorialists, middle-men, and fakirs. Who is a fakir? One who runs a ticket scheme. Beyond this all toilet-soap and baking-powder methods, baby-books, and old-age gratuities are legitimate if successful and redound to the elevation of photography. One whose accomplishments would lead to expectations of better conduct, places a placard in his display announcing and emphasizing the permanence of his productions. What matter if the public infers that all other work is perishable. We know it is embarrassing to criticise a man with a good bank account, so fraternal recognition will be accorded.

The public needs educating, so we often hear. The public is educated by what it sees. Photographically, the one who places the greatest number of pictures before the public is doing the most to educate it; in this as in other fields the popular magazine holds supremacy. How seldom one sees a reproduction of the work of those the craft has learned to consider great or pictures notable except in the matter of the one portrayed. The names of these great men are comparatively unknown to the world at large. With their productions it is the same; and so it is that they who strive to emulate, but can only imitate, complain of lack of appreciation. Will recognition alter this; will it circumvent the present attitude maintained that in business we confront a condition and not a theory, while in art we confront a theory and not a condition? While editors struggle to advance the art side, along comes the peripatetic fable now become so familiar; Mr. G. Ade could doubtless have made it interesting; if more emphasis were placed upon the "swelled-head" feature it might become classic. This fable never says the hero made but one "high art" picture, that he knew he had made one till he was told, that he knew how it happened or ever made another, because some one has delivered the ultimatum: "Whatever bears my name is art," and trade passed on to some one who could duplicate his samples, is no argument against art. A prominent association man advised a more rural brother thus: "Of course it's all right to make a convention exhibit and win a medal, if you can; but, if I were you, I would make good, straight, clean, consistent work and give my customers what they want." How he would resent being quoted as saying that convention pictures—recognition pictures—are crooked, unclean, and inconsistent.

"The public does not appreciate art," this is the fortress behind which the photographer defends his inconsistencies and shortcomings. How is it with your public, the public you serve? Is your wealth, education, and social standing such as to develop higher æsthetic taste than is possessed by any of your customers? Are you sure you are on a level with all of your clientele? Some incidents: A photographer's advertisement calls especial attention to the quality of his work and advises a comparison of the same with that of cheap competition. A customer remarks that all but one of a dozen portraits had spots or marks of some kind and that one showed paste that "squeezed" out on to mount. The "public" says: "Blank has a fine display in his showcase, but customers never receive any work that resembles it." Photographers say: "Blank is winning

lots of honors but there are a number, right in his own city, that are delivering work way ahead of his." Some admit "I got into the business at just the right time," meaning the time when it was unnecessary to know anything, and thanks to the salvation of printer's ink they have made a financial success without changing their other conditions. Has your public granted you recognition? If not, does it need to be educated or to be blindfolded?

Not content with recognition, for a lure, some would have the public hamstrung by a trade union of some æsthetic name; they cite the diploma of the professional man and the certificate of the laborer. The diploma brings responsibilities in a greater degree than it brings protection; the certificate man is followed in his work by an inspector. Without advocating any project, it would appear that the public will gain superior protection when the photographers agree to date the year upon each portrait and agree to suffer expulsion if they *sell* or *deliver* any work that is below the standard of requirement. A Western photographer placed samples at his door which embodied a new pictorial idea—not a new mount or a new kind of paper. A professional man, a leading light of the town, being interested in the display, paused and entered to inquire *why* the new idea was introduced. Fortunately he was favored with a complete explanation, which prompted the exclamation: "At last I have found a photographer who has some idea of what he is trying to do." Though he had always ignored the photographer previously, he at once booked his whole family for liberal orders. Truly, there is an advantage in knowing one's business sometimes.

That the well-educated photographer as he stands to-day has no advantage over the fakir in the profession is yet to be proved. The well-educated man has all the advantage he needs as long as he is disposed to use it. An expensive establishment may be an excuse for high prices on a common class of work, but let us hope that "recognition" will never be called upon to put a middle man out of business because he sells his portraits of equal merit at a lower price. The man who fills his display with the work of another man which is better than he *can* do himself is a fakir of but very slightly darker hue than he who crowds his case with samples of work much better than he *will* do.

The universal basis of prices is the "finish;" collodion, platinum, and carbon, each in turn, the photographer has sworn to be art. Personal ability is not rated. There may be a limit to the actual cost of a photograph, but there is no limit to the value of a picture. There is not a difference of $99.75 between the cost of an operation for appendicitis and one for the removal of "cutaneous papillæ," yet some of our advisors would have us believe that photographers in the "specialist" class are bound to cleave their subjects beyond possibility of recognition even though a simple operation is demanded.

In some quarters they are looking forward to a "new picture" which shall bring about the artistic and financial salvation of the craft. Are the present limitations exhausted? Perhaps if some of the tonalists will portray hair that one can believe is hair and not an "Ostermoor Felt," it will be a new picture in the estimation of their customers. If some of the old school will portray hair rolling softly from its shadow instead of peeling from the edges of a cracked dinner-plate, it will seem new and not displease. Two red lips instead of one red and one white will not pall on the senses. If some will deliver work artistically and technically equal to their samples, or what they advertise, it will be most decidedly "new."

It is folly for the craft to consider pho-

tography as something abstract rather than concrete. Every man who associates the name of the art-science with his own becomes a fraction of the great unit; whatever he does, or fails to do, has its bearing to elevate or depress the standing of the whole. Your greatest obligation requires no revelation. You are more indebted to the public than the public is to you. There is one thing higher and better than recognition and that is *confidence*, the confidence of the public—your public. You can well afford to slave for years, if necessary, to gain this confidence and gain the ability not to betray it. Zangwill says: "Dutch art is a perpetual grace to God for the beauty of common things," and you can have no higher ambition than to render grace to God for the innate beauties of the common people by serving them honestly and to the best of your abilities.

Today all great questions are being settled by the voice of the people—public opinion. While delinquent in matters of art, there has come a great awakening, as testify the immense appropriations for public parks and civic betterments. As the public settles other matters, so will it settle the burning issues of photography—not according to the recognition of higher authority, but according to the treatment it has received at the hands of the photographer.

The highest types of art demand the height of nobility in the artist. An honest man is the noblest work of God. It may require an honest man to be an artist, but it requires no artist to be an honest man. Let us watch our advertising file to make sure that it will correspond with the "book of life," so when the time shall come we need it most, we will be granted—recognition.

COLOR-SENSITIVE PLATES AND SCREENS FOR COPYING DESIGNS, CHINA, ETC.

BY T. THORNE BAKER, F.R.P.S., F.C.S.

ALTHOUGH the acknowledged aim of orthochromatic photography is to record the original subject in monochrome, correctly representing everything in it according to its visual brightness, many occasions arise on which one wants to produce an *incorrect* result in order to bring out some delicate pattern, or to show one subtle color in contrast with another similar, yet different, color. If a vase be of deep blue with a green pattern on it of a depth of color equal to the blue, an orthochromatic result should give both vase and pattern of the same density, and the result would be dull and meaningless; but if now we depressed the blue and enhanced the green, the pattern would be plainly visible and our object attained, notwithstanding that, strictly speaking, the result was far from "orthochromatic."

We shall show in the following article how to select a light-filter and plate to meet such emergencies as these, describing general methods rather than attempting any particularization.

Plates.

It is fortunate, in the first place, that there are three kinds of plates to be had, all distinctly different in their behavior toward colors. Thus the ordinary plate *i.e.*, one which is non-orthochromatic, is chiefly sensitive to violet and blue; the average "orthochromatic" plate is most sensitive to these colors, but is

also fairly sensitive to green and yellow; the panchromatic plate is sensitive to violet, blue, green, yellow, and red, whilst still further, some firms make a specially red-sensitive plate which is almost unaffected by green. This latter variety will be found most useful at times.

Accentuation.

When taking a photograph in which we want to get any portion accentuated, or want the *clearest* result possible, at the risk of sacrificing a color-correct rendering of the original, it is first necessary to study the nature of the subject, and see of what colors it is chiefly composed. The example of the deep blue vase, with an equally deep green pattern on it, has already been quoted. Another example is that of a red tapestry, with a plum-red and orange-red pattern on terra-cotta. The three reds would all appear black in the print under ordinary circumstances; we must, therefore, decide which color we wish to be bright, and which dark, so as to differentiate, and can then select plate and screen accordingly.

Old Engravings, etc.

Another case which is constantly cropping up is the copying of old engravings, faded photographs, and so on. Take, for instance, an old and yellowish engraving, with yellow or brown patches here and there. If we photograph this with an orthochromatic plate and yellow screen, the stains and patches will not appear, and—in the photograph—will look fresh and unblemished. An old and brown faded silver print, if photographed with an ordinary plate and blue screen, will appear vigorous.

These two examples lead us up to the enumeration of the general lines on which to work, which may be briefly set forth as follows:

Accentuating Lighter.

If we wish any particular color to appear light in the print, a light-filter of as near that color as possible must be used, and the plate employed must of course be sensitive to rays of that color. Sometimes a yellow pigment is yellow through its reflecting pure green and pure red rays, etc., and in such a case either a green-sensitive plate or a red-sensitive plate would meet the case.

Accentuating Darker.

If we want any color to appear dark in the print we must use a light-filter of color complementary to it; thus a diagram drawn in blue ink could be best photographed through a deep yellow screen.

If we are photographing two shades of one color in a subject, such as a bluish-green pattern on a yellowish-green background, the light-filter should be of one of the weak component tints, not the tint common to both. Thus in this instance of the two greens, either a blue filter or a yellow filter would cause one color to appear light against the other dark; whereas a green filter would very likely make both appear of equal density.

Filters.

It may be thought from these remarks that an immense, and costly, collection of light-filters is required by the photographer anxious to make pictures of his bric-a-brac, china, and so on. But glass of sufficiently approximate color can in many cases be bought of a glazier, deep blue, emerald green, yellow, and orange being every-day commodities. It is possible that with such inexpensive screens one will at times get hold of a piece of glass which causes distortion, and such must, of course, be discarded. As a general rule, however, a piece quite flat enough to be successful can be purchased for a penny or two.

Red glass, for extinguishing green and bluish-green light, is not often obtainable commercially, but a lantern plate, unexposed, fixed and well washed, if stained up in the following bath, will make an excellent red filter:

Tartrazin	10 grains.
Eosin or erythrosin	10 grains.
Water	4 ounces.

Filter this before use. Two or three screens stained to varying depths should be made, as each may be useful for some special occasion.

Naphthol green is a good dye for staining a green filter, tartrazin for an orange, and methyl-blue for a blue-violet filter. By mixing these dyes in different proportions an endless variety of screens can be made. If sufficiently pale they can be used in combinations, and by examining the subject in the focusing screen the best combination for the purpose may be selected.

Filters and Plates.

If a blue screen be used, an ordinary plate should be used with it; an ordinary orthochromatic or green-yellow-sensitive plate is required with a green or yellow screen, and with a red filter a panchromatic or, still better, a special red-sensitive plate should be employed. A green-yellow-sensitive plate and yellow screen, necessitating about five times normal exposure, is suitable for copying stained engravings or old prints, typewritten letters, and any ordinary subject such as china, etc., where a corrct rendering is required of the original—flower studies of daffodils, crysanthemums, and narcissus. *But* in the case of china, tapestry, and flower studies, and especially in picture copying, a panchromatic plate and yellow and orange filter are essential if any deep oranges or bright reds appear in the subject; this, of course, applies equally to fruit studies.

Groups of Several Colors.

We have still some cases of every-day occurrence to deal with, and one of these is the photography of a subject composed of miscellaneous colors, where we require contrast and yet do not want to completely sacrifice a correct rendering. Suppose, for example, some time-worn tobacco pouch of crimson plush is to be photographed side by side with a briar pipe, whose memory is cherished, and a tobacco tin with a deep green label. Assuming pipe, pouch, and label to be of much the same brightness, a strictly correct endering in monochrome would be devoid of contrast; we must, therefore, aim at a *slightly* false rendering in order to compensate for the *deficiency of a monochrome print to differentiate colors.* Photographed with a green filter, our print would show the label light, the pouch almost black; with a red filter, the label would appear black and the pouch light, and so on. If we choose a filter the color of which is largely partaken of by one object and to much less extent by the other, we shall get differentiation combined with tolerable rendering. In this instance a deep orange filter and panchromatic plate would solve the difficulty, the pipe and pouch appearing lightest, and the label rather darker, but not too dark.

Photo-micrography.

Photo-micrography is a subject in which a wise selection of plate and filter enables one to produce excellent results when ordinary methods completely fail. Only recently we have found the great value of a deep green filter and specially green-sensitive plate in photographing some indifferently stained specimens of bacillus pyocyaneus, pneumococci, etc., the pink stain being insufficient to give a photographable result without this artificial intensification. Similarly methylene-blue and gentian-violet stained

bacteria are infinitely better rendered with a yellow screen. Indeed, in this high-power work an intensifying screen is the secret of success.

Sensitizing Plates.

Those who do not wish to keep a variety of plates in stock will find the following scheme of sensitizing useful:

Slow ordinary plates bathed with—

Erythrosin and ammonia become powerfully sensitized for yellow-green rays.

Homocol or pinachrome become powerfully sensitized for all colors.

Pinacyanol become powerfully sensitized for deep deep.

The general methods of bathing plates were given last year in a number of the *Practical Photographer* devoted to orthochromatic work and need not be repeated here. Suffice it to say that, where very great local sensitiveness is wanted, bathed plates, if well prepared and used prefectly fresh, are generally more satisfactory than commercial plates. The latter are, however, more convenient, but require longer exposure under the circumstances.—*Practical and Pictorial Photographer.*

THE MULTIPLE TONING OF LANTERN SLIDES.

BY F. MARTIN-DUNCAN.

THERE are very few photographic processes that will better repay a little trouble, attention, and experimenting than lantern slide and transparency making. Certainly no printing paper is capable of yielding such rich, transparent shadow detail or general brilliancy as a really good lantern slide; on the other hand, there is nothing much worse than a bad lantern slide.

The selection of a suitable lantern plate should not be a difficult matter, as practically every manufacturer of ordinary photographic plates also produces lantern or transparency plates. Roughly speaking, the lantern plates now on the market may be divided into two groups, those intended to give warm tones and those intended to give cold tones by development. To a certain degree this is a somewhat arbitrary classification, as by judicious consideration as to exposure and development it is possible to produce warm tones on a so-called cold-tone plate, and *vice versa*. By carrying out slight modifications in the exposure and development, a range of tones from dead black, through browns, to a warm red can be obtained, so that with comparatively little trouble a very pleasing range of color can be produced.

The ideal that one should aim at, in making lantern slides, is a long range of gradation, total absence of excessive contrasts, delicate detail in shadows, and suitable color. The harsh soot-and-whitewash commercial slide is an abomination, except for copies of diagrams or drawings of plans and designs, where the maximum amount of contrast is, of course, most desirable. Although a large number of the plate manufacturers advocate hydrokinone as a developer, it is by no means an ideal one, unless compounded and used with due regard for its contrast-giving, detail-blocking proclivities. Metol-hydrokinone will generally be found to yield better results, though personally I prefer and nearly always use amidol. Next to amidol, my pet developers for lantern slides are pyro-soda, and glycin; but the latter de-

mands clean fingers, dishes and measures, a trace of hypo producing stains, otherwise it is a fine developer, giving beautiful shadow detail.

One of my reasons for nearly always employing amidol as the developer in making lantern slides is the beautiful black obtainable with it, and the delicate half-tones. Also, it makes an ideal slide for toning, a method that has not received anything like the attention it deserves, particularly local toning, by which means most pleasing results are to be obtained.

The slide, after developing, fixing, and washing, should be allowed to dry thoroughly, and then, if the whole of it is to be toned one color, be immersed in the solution, or for local toning the solution applied to the portion that it is desired to tone, by a tuft of cotton-wool or a mop camel-hair brush mounted in a quill; on no account must a metal-mounted brush be used. When one portion of the slide has been toned, the whole should be washed and allowed to dry before the second toning solution is applied. In this way, working with care, three or four colors may be produced on one slide. For skies, which should be fairly fully developed so as to give good cloud detail, for sea-scapes, and water generally, a pleasing and suitable blue tone is obtainable with the following formula:

Ammonium sulphocyanide ..	60 grains.
Gold chloride.....	3 grains.
Water, distilled	2 ounces.

To obtain a warm brown, bleach in the following solution:

Potass. bichromate	10 grains.
Hydrochloric acid	10 minims.
Water.....	1 ounce.

Wash in a saturated solution of potash alum to remove the bichromate stain. Rinse in water, and then apply a ten per cent. solution of ammonium sulphide until the desired tone is obtained. A very beautiful and permanent sepia tone may be produced with a solution consisting of:

Potassium chloroplatinite...	1 grain.
Mercuric chloride	1 grain.
Citric acid	9 grains.
Pot. bromide (10 per cent. solution).....	1 to 3 minims.
Water.....	1 ounce.

This is also a useful formula for bromide papers, as it substitutes a platinum for the silver image and practically renders the print absolutely permanent.

The following formula gives a beautiful golden-yellow tone, and is also the starting-point for the production of a delightful delicate green, very suitable for young foliage:

Potass. citrate (10 per cent. solution).....	1½ ounces.
Potass. ferricyanide (10 per cent. solution)	2 drachms.

Add to the above, stirring the while, sufficient of a 10 per cent. solution of nickel chloride to redissolve the first-formed precipitate. A fresh solution must be made up each time, and the ferricyanide must be slightly in excess, the solution appearing a brownish red by transmitted light. Tone with this solution until a bright yellow is obtained, rinse in water, then in very dilute hydrochloric acid, and finally wash in running water for ten or fifteen minutes.

If 10 per cent. solutions of potass. citrate, potass. ferricyanide, and cobalt nitrate be made up, a very beautiful crimson tone can be produced by mixing as follows:

Potass. citrate (10 per cent. solution).....	1½ ounces.
Potass. ferricyanide (10 per cent. solution)	2 drachms.

Slowly add sufficient cobalt nitrate solution so long as the precipitate is dissolved by the potass. citrate. The ferricyanide must be in excess and the solution freshly made. Tone and wash in hydrochloric acid bath as above. If a cobalt-toned slide, or portion thereof, be treated with dilute solution of iron chloride, a very fine purple color can be obtained.

With a little practice and experience these formulæ will be found to yield very pleasing and permanent results.—*Amateur Photographer.*

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By O. Pierre Havens, Jacksonville, Fla.

By A. T. Proctor, Huntington, W. Va.

By Nast, Denver, Col.

By Minns, Akron, Ohio

By Minns, Akron, Ohio

By S. Newman, New York

By W. H. Potter, Indianapolis, Ind.

By F. B. Clench, Madison, Ga.

A. T. PROCTOR—A MAKER OF EXHIBITION PRINTS.

BY SIDNEY ALLAN.

PHOTOGRAPHERS who have attended conventions for the last few years must be by this time thoroughly familiar with A. T. Proctor's work. He has been a constant and welcome exhibitor. His exhibits always belong to the best, no matter who his competitors may be, as the quality of his prints is such as we usually only see in the leading metropolitan establishments. He aspires to the so-called "artistic" print, and at its best his work shows all the earmarks of advanced pictorialism; he harps perhaps a trifle too much on the low-toned quality (the Secessionists ought to be very fond of Proctor, but probably have never heard of him), but it helps to give them a distinguished air. In a few words his prints have an individuality of their own.

I must confess Proctor's work has always been something of a mystery to me. Here is a photographer, I said to myself, who lives in a little one-horse town in West Virginia and delivers goods every bit as slick and elegant as that turned out by the top-notchers. Is it possible that this capital of Cabell county, with less than sixteen thousand inhabitants, has developed a superior taste in photographic ware to other towns of its size, and is there really a demand for superior portraiture among the lumbermen, mine owners, and factory employees of Huntington? It is hardly credible. But how about the impression one gets from his convention exhibits? This is the crucial point. I had always my doubts whether these exhibition prints—not only his but of many others too numerous to mention—really represent the average work these exhibitors do in their home establishments. I took the trouble to investigate and found out that I was right.

The work which secured him medals and honors—he can furnish a list of a dozen prizes or more—does not represent the every-day work of his gallery. It represents Proctor at his very best.

This is not meant as a reflection on the merit of his routine productions. I perfectly realize that he endeavors to make them as perfect as he can afford to do. Only the conditions are against him. In a town like Huntington people do not know much about art, they do not even know much about it in the majority of larger towns. Of course, in New York, the art centre of the United States, the number of people who would cheerfully patronize a Proctor convention print is quite large. And yet even in Gotham taste is rather diversified. There are some fastidious people who would only stand for a Steichen print. Others prefer the Davis or Eickemyer brand. Marceau is still the ideal of the *nouveau riche* of the upper West side. And in some parts of the city they have not even awakened to the fact that there is anything like a pictorial print in existence.

And Mr. Proctor would be, indeed, a foolish man if he did not know the taste of his townsmen. The large mass of the public does not care a rap for artistic effusions. They merely want to see themselves depicted to the best advantage possible; they prefer a flattered likeness to anything else, and it does not conform with sound business principles to force upon customers something they do not want and in most cases completely fail to appreciate.

A photographer, like a pilot, must know the waters he sails on; he must

know all its treacherous currents and dangerous places, or his gallery will be wrecked before he is aware of it.

Of course, it seems a pity that a man with Proctor's talent should have to waste the best years of his life with mediocre work. But what can he do? Go to a larger town? It would be hardly advisable as long as he makes a fair living in a smaller town. Portrait photography is strictly a bread-and-butter proposition (unless one is at the same time a painter like Steichen, or has a large bank account like young Coburn). A metropolitan establishment is not necessarily conducive to more artistic work.

We find in every metropolis a large number of concerns who find it more profitable to cater to the general public taste, and they are, as a rule, financially as successful as the more artistic ones. It is an absolute impossibility to make a pictorial print out of every sitter that comes to a studio. Some persons are strictly unsympathetic, and yet cannot be refused. A photographer can not, like some famous painter, Sargent for instance, say to a prospective sitter: "I am sorry, but I really can't make your portrait. I am too busy." He is there to portray everybody. And even the best of photographers has to stretch a little bit on that point. Do you believe Stein or Strauss would send anybody away from their studios because the person would not conform with their ideals of pictorialism? Indeed not. They would try to make the picture look as well as they know how. And that is all there is about it.

I do not know what Proctor's feelings are on this subject. I only know that he is exceedingly ambitious—and competent. He has proven that he can do good work. Whether he would under more fortunate circumstances produce an average approximating the merit of his exhibition prints is exceedingly doubtful. I fear he would allow his pictorial notions to run away with him. As it is his convention pictures are dangerously near the border line.

It is futile, however, to speculate upon what a man might do under such or such conditions. One can only judge him by what he does at present. We are all more or less, no matter in what walk of life, the victim of circumstances.

Proctor is to me typical of the dual existence so many of our photographers lead. He knows he is capable of better work than that by which he is forced to earn his living, and yet he does not find the opportunity to do so in the ordinary ways of life. This dissatisfaction with existing conditions and the manly desire to rise above them have made him "a maker of exhibition prints."

About his methods I know very little. I have never seen him work, but he was kind enough to answer some questions which I asked, and I will quote them in his own words for the benefit of his numerous admirers:

"My studio is lighted with top and side light. I use some painted and some plain white and black cloth backgrounds, and frequently make use of the walls of the studio themselves as backgrounds, which is apt to give a much more artistic natural result. I control the lighting by an opaque screen, about five feet wide and six feet tall, and a head screen. My average time of exposure is for cabinet work about two or three seconds. I generally make four or five exposures of a subject. I eliminate unnecessary detail by shading with opaque screen and dark grounds. My aim and ideal in portrait photography is to produce good reliable work with as much art in it as possible without making it appear freakish. In other words, good well-lighted, well-balanced work with good gradation of light and shade."

This is a simple recipe, but it clearly shows that Proctor knows what he is aiming at. It furthermore shows that the influence of Hollinger and men like Pierce, Garo, and Goldensky is reaching the smaller towns. It is a movement for simplicity, for more breadth in treatment, and more naturalness in pose and in the treatment of backgrounds. This combined with good taste and a more pronounced refinement in the general make-up of prints must necessarily produce satisfactory results.

Proctor does pioneer work for the smaller galleries. And the expense of material has of course to be taken into consideration: a small gallery can not afford the same quality of goods as a bigger one. But, after all, what do folders and mounts, uncut edges and tissue-paper effect amount to. They are only side issues. A print can be in good taste despite all these whimsical innovations.

Proctor has made a very interesting experiment, and although his routine work does not reach the standard of his convention exhibits, it is good, honest portraiture, vastly superior to what is generally seen in the show cases of provincial towns.

If a man is capable of superior efforts, his ordinary efforts will necessarily show some of the superior qualities. What is once in a man must come out. And there is no doubt in my mind that his everyday photography would not be half as good if his convention pictures were not so masterly, as they represent the pick of a year's labor, the maximum quality of excellence which he is striving for in all his inferior and less sympathetic work.

As for his honors; that is every man's own affair. Some of our biggest photographers, like Falk and Steffens, have none to show and have never attended a convention. Other men like that sort of thing. Pirie MacDonald has as many decorations as a German general. But it has little to do with merit, and still less with success.

Only the man who tries to do his very best in the very limitations that surround him—no matter whether it be our illustrious friend, J. C. Strauss, or humble Mr. Smith, of Pewanbell—raises the standard of the profession, and he alone.

It is the duty of every photographer to show as much good taste as he possibly can, and if all would go in that direction, as far as they can satisfying popular taste at the same time, the final result would not be failure. Although some may say very little, it will after all help to improve the taste of the community, and give portrait photography a chance for further development.

FLASHLIGHT HINTS.

Given the necessary means for producing an adequate light, the best principles of good studio lighting are also the best that can be studied for flashlight work.

When photographing a large interior by flashlight spread the light or lights over as large an area as possible, but have a principal light to dominate the general effect.

A reliable flashlight mixture for simple ignition on a train of gun-cotton—not for use in a lamp—is made by carefully mixing magnesium powder 3 parts, chlorate of potash 6 parts, sulphide of antimony 1 part.

When taking a dark interior by flashlight, measure the distance from the camera to the principal object and obtain correct focus with the camera in daylight of another object at the same distance. Then return the camera to the dark interior for use.—*Photographic News.*

PHOTOGRAPHIC POST CARDS AS A SOURCE OF PROFIT.

BY DAVID GRAY ARCHIBALD.

To those who have not investigated the subject, the number of pictorial post cards that are purchased annually, most but not all to be sent through the mails, is incredible. The amount of money expended in buying them, even in the most out-of-the-way places, is astonishing. At the very outset I can do no better than give figures pointing out how wonderful has been their growth in popularity and how great the possibilities of making dollars through sense in the manufacturing of them.

During 1904 over 2500 million post cards went through the post in Germany, Great Britain, and the United States alone. The figures for 1905 are not yet available, but it is estimated the total for these three countries will reach nearly 5000 million. One firm alone is known to have put out one million bromide post cards of actresses per week.

Plain unexposed cards cost from $1.35 to $2.00 a gross (prices vary according to how good a bargain you can make with your dealer), and at a selling price of five cents each bring $7.20 a gross. There is, as you see, a good margin for profit for maker and seller.

Working under the same conditions in the manufacturing of the cards few should be wasted. Once a negative is "got going" in the printing, the continuance of the printing is almost automatic.

To those of a pessimistic turn of mind as to the continuance of the prosperity of the business, it will have to be acknowledged that it may not always be as great as it is now, but the craze is not dead by a good deal, and when it is there will always be many cards sold.

The photographer has a chance here that is hard to beat. It is an easy way to make money out of a hobby or to supplement an income from the studio handsomely. Few studios are kept fully occupied with portrait work. The photographers have the negatives or can easily get them. No matter how little spare time there is, it is possible to get the few negatives required.

Many of the best photographic post cards are printed by artificial light. This permits of working in bad weather or at any time when it bests suits you. In fact, from my own experience I would say that the gaslight printing cards are the easiest ones to make satisfactorily and, taken all around, best suited to the average worker's case.

I would recommend him to investigate the claims of the firms advertising for business in making mechanically printed and process cards. If he can delegate more or less of the work of making the cards to others he is left freer to do the executive work himself and work up new business and create new material. There are hand-fed Eastman Velox printing machines that have an output up to about 700 an hour. The varying number of cards you can get off in it comes from the difference in the printing time of negatives and the matter of whether you use one or more at one printing. They sell for $125.00 and use a Cooper-Hewitt electric light for illumination.

The subjects that one selects to put out on his cards have as much to do with the success of the enterprise as has the technical excellence of the work when done. And, by the way, some of the views least thought of have "caught on" best and proved good sellers. To attempt to enumerate all

the kinds of subjects that have proven "good sellers" would be to make a list of practically everything in the world that can be pictured. When shown in a particularly favorable aspect of lighting and exceptional excellence of technique, few things will not sell.

But whatever you do, make them vital in interest and compelling in beauty. Public buildings, prominent places and people, parks, street scenes, etc., are staple subjects.

There are various kinds of cards on the market ready for you to print and there are others possible for you to make for yourself.

The lettering of the cards should be very carefully done. A good title helps along a poor subject and makes a better one more salable. A picture card *without* a title is simply a picture card. With a good comprehensive title it at once becomes a thing of interest and of value according to what it portrays.

Most cards are intended to be written upon before being sent, so that unless there is a place that prints out white or very light, you must allow for it. A few minutes' study of a dealer's stock or a friend's album of cards will show you what is usual. The negatives from which you print by contact must of course be of post card size. They can be taken direct in the camera or made specially of the right size by copy-negative methods through reduction or enlargement in the camera. In taking and making negatives of most subjects wanted, it should be borne in mind that they are meant to be literal reproductions of the places, etc., they represent, and then people want to be able to *recognize* everything in sight. Of course to do that they must be needle-sharp in definition. The proportions of the post card should be borne in mind also when studying the composition of your picture. Made for this one purpose alone, they can be permanently "doctored," etc., for printing from at any time without preliminary operations.

While daylight has to be used in some of the printing processes spoken of there is a greater likelihood of the photographer adopting some one of the more convenient "night-printing" methods of reproduction. He is apt to have leisure time in the evening and the conditions for working by artificial light are more easily controlled. The gas-light printing cards are the ones most favored, although many big manufacturers use the pure bromide cards.

There is no better light than a Welsbach incandescent gas mantle for one to expose by. An opaque dull-white reflector should be placed back of and at the two sides, while in front of it there should be a shelf to hold the frames. A neat arrangement is on the market by the Eastman Co. By placing the light permanently on a board a foot wide and having parallel lines ruled on it an inch apart (forming a definite scale of distances) the printing frames can always be placed just so far away from your standard light. Each negative can then be marked with its printing time at so far from the standard light.

Granting the composition of the developer, its temperature, and the temperature of the room in which you work do not vary from the normal (about 70°), you can once for all mark your negatives with printing time, etc., and at any time in the future, without previous trial in printing and developing, duplicate results.

There are many ways of actually printing cards. When you come to be in earnest in the work you will want to expose more than a single card at a time. There is a little more trouble in the exposing to do so, but it will make more out of your time to print two

or three or four at one time. Four cards can be made in a 10 x 12 printing frame. The light in this case, instead of coming from a single Welsbach burner, should be from two placed side by side.

A friend of mine buys his post cards in sheets of the stock sold as double weight. He makes four cards at once and cuts them up afterwards in sizes to suit. He prints, develops, rinses between development and printing, fixes, washes, dries, straightens out all four at once. When done he cuts them into post card size and makes them post cards by marking on the reverse side the usual matter:

POST CARD

THE SPACE BELOW FOR THE ADDRESS ONLY

with a rubber stamp.

The summer resort men that work from wet negatives either put a thin, transparent piece of celluloid film *between* the *wet* negative and the *dry* card, or they put the negative in an enlarging lantern and "throw it up" on the card placed in front of it on an easel, after the manner that enlargements are usually made.

In grouping negatives for printing together select those that singly printed have about the one printing time. If they vary slightly you can "hold back" individual ones by placing over them a piece of cardboard in front of the printing frame, when their printing time is up; meanwhile the others are allowed to print on to completion. If one of the negatives in your group of four takes 20 seconds and another 30 seconds with your standard light, then cover up the 20-second negative after 20 seconds have elapsed and allow the other to print up to the full 30 seconds. In printing give exposures that will permit of full development of the image on the cards, as otherwise you lose some of the richness of the paper.

For getting gray effect of border and full black in the picture part you will have to double print. First, print the part you want to show in tint and then protecting this print the negative. It requires two maskings to do this; one mask to protect the picture part and permit the border to print and one to protect the border and permit the picture to print.

By varying the time of printing the shaded part and the picture part, you get two tones in the one printing and developing on the same card. The Eastman Co.'s display cards of Velox post cards show how effective this can be made. These extra touches, while adding extra work to the getting out of your cards, add value to them and lift them out of the commonplace class.

If constantly printing from the same negatives it is best to have enough printing frames to allow you to leave them on the frames ready for use between times.

Deep printing frames are better than shallow ones; the pressing being more evenly distributed tends to give better contact and to lessen the chance of breaking negatives in the printing from them.

The developer for your cards, be it what it may (it should be the one you have found by actual trial best suited to your adopted brand of cards), should not vary in its constituents or temperature. The bath of it should be made big enough in volume at the start to do all the work you are going to turn out at that one developing. This will permit you to run through all your cards without any changes or addition to the solution. Test out the developer each time to see that it is working clean. To do this, I take a number of small strips of the paper, card, etc., I am using and, without exposing them to my standard exposing light, put them halfway into the developer. They are

allowed to remain thus half-placed in the developer for the time it usually takes to develop a print or card. I take about fifteen seconds to develop mine. They are then washed and fixed as usual with prints. After fixing they are examined in good light to see if there is any tint on the paper to show where it was in the developer. If it shows any tint at all a definite quantity of bromide of potassium, 10 per cent. solution, is added to the bath. The same operations as before are gone through until no perceptible change takes place through the action of the developer on unexposed parts of paper.

With the developer once balanced there is nothing peculiar to the development of post cards over paper prints. You want to have a depth of developer of one inch or more in a tray several times larger than the cards, a bath of water at hand (to wash out developer between developing and fixing), and a bath of acid hypo near at hand to the water. To be sure they are fixed properly, I use a second acid-hypo bath of usual strength, and allow them to remain in this an additional five or ten minutes. To plunge them down in the hypo bath, I use a small inverted glass funnel, funnel side down. This permits you to work along without getting your hands into the hypo. By having someone else to attend to the fixing of the prints you will get along much faster, for then you can throw the cards into the washing water after their having been developed, and the other person can rinse them and, taking them out of the water, fix them well. By using a wooden photographic clip to hold the cards when pulling them through the developer you can avoid wetting your hands.

It hardly pays to develop as you go along as you have to do too much drying of your hands if you work alone, and if working with someone too much work is done by the one who prints. If your hands are moist there is a good chance of spoiling negatives, and if you do two or three things at once (as develop when some are printing) your attention is distracted. Once you have got your printing time and have tried out your developer all is well and you can print off the edition. When through developing a lot, run through them and count out your cards that do not come up to the standard so that you will have your full count when all are done. I usually over-print a little to allow for accidents along the line to the finished card.

The washing of the cards should be done in a very thorough manner, for the thickness of the card stock which the post cards are made from needs more prolonged action of the water upon it than paper prints to eliminate the hyposulphite of soda. Many changes of water, putting them from one to the other tray, is better than a single tray and pulling them from top to bottom.

After washing, the cards should be drained as much as possible of the water they hold.

When the post cards have become surface dry they can be flattened or straightened out by pulling them under an ordinary desk foot-ruler. To do it, put down a folded towel smoothly on a table, over this put your card, face down; lay the ruler on this and holding it down (rounded edge away from you), with a certain gentle but sure pressure, pull the card away from you and under it in an upward direction. This movement is much the same as is used in burnishing prints. After pulling under the ruler in several different ways, they are in condition to place between layers of photographic or lintless blotters. They should be allowed to remain under heavy even pressure for twenty-four hours.

All cards should be trimmed before

they are sent out. This is not absolutely necessary, but as it takes off the edges that have been marred during the manipulations of making, it freshens them up greatly. A "Bradley" trimmer of about 14-inch blade is a desirable part of an equipment, not only for trimming cards but for separating the card stock bought in large sheets.

The cards may now be considered finished. I advise they be kept under pressure until delivered. In making packages put them up with a piece of cardboard on either side and put a weight on the top of each pile.

When many thousand cards are sold of one subject, you had better go to one of the firms that advertise and make arrangements for them to do it for you. There is an actual money saving in it for you. The work is often superior to your home manufacture, and doing it you can get next to some of the non-photographic cards. Non-photographic cards sell well, and the man who makes cards himself does himself an injustice if he does not supplement his stock with them. (See the back inside cover.)

Make every post card you send out an advertisement for you, by having your name on it, if possible, and by enclosing it in an envelope with your name on it. When titling you can attend to the putting on of your name.

The question of prices and what proportion to allow for the retailer of your cards is a serious one. Taking the cost of your cards to you to make as a basis, the difference between that and what they bring retail, you can figure out your division. It must be worth your while and their while, or they will not handle them.

Keeping on hand a stock of cards, all ready to be delivered when an order comes, means having some money tied up in the venture. But it also means that you can take full advantage of any rush orders that may come your way. If you have none on hand you will have to make them *at once*, even if it is not convenient, or it may mean that you cannot fill the order. Doing the work when there is no rush on, you can do it better, and by utilizing the hours that you can best spare makes it more profitable.

Post cards to be bought must be seen. To be seen they must be placed where people can view them. In an attractive display form they sell best. In packets in a show case they will not attract much attention; still they will sell. It is not necessary that they all be exposed to the elements and to careless handling, much of which makes them unsalable. A neat attractive display card, or case or rack display, will add to your sales. There should not be too many cards in any one display, or confusion will result.

This is the end of my article; it should mean the beginning of your post card business. To do it is easy; just send out for a packet of cards and begin. Still many photographers will deliberately throw away the chance to make, what they deplore so strongly at conventions, etc., and that is the chance to make through the exercise of a little sense—good money.

Varnish for Platinum Prints. The following varnish has been recommended by our Austrian contemporary as being valuable for treating platinum prints in order to give them a gloss more closely resembling their appearance while still wet. The print may be completely immersed in the liquid varnish, or this may be brushed over it, the excess being removed by a piece of absorbent paper before hanging the print up to dry in the usual way. The varnish is made by dissolving one ounce of sandarac in a mixture of four ounces of benzol, four of acetone, and two of absolute alcohol.

A WONDERFUL PHOTOGRAPHIC ALBUM.

[In search for some light reading the other day we came across the following interesting item concerning our friend, B. J. Falk, in *Tit-Bits*, and thought it worth repeating.—Ed. W. P. M.]

The writer was recently privileged to look through an album which has probably no equal in the photographic world. It contains no fewer than twenty thousand portraits, each taken by the owner of the book, Mr. B. J. Falk, the well-known New York photographer, whose work is known in every quarter of the globe. The photographs contained in this remarkable album date back to 1878, when Mr. Falk first took up the work of professional portraiture, and consequently many of them are now extremely rare and valuable, indeed some of them can never be duplicated, for a few years ago Mr. Falk had a fire in his studio which destroyed many thousands of negatives. During Mr. Falk's many years of professional life he has made some 150,000 plates, and there is scarcely a celebrity of the last quarter of a century who has not sat to him at one time or another.

While glancing over this album with Mr. Falk many interesting stories regarding the sitters were related, for of all of them the artist had pleasant recollections. Pausing before a fine study of Salvini, Mr. Falk said:

"He was one of the kindest-hearted and most considerate men that ever came into my studio. It was years ago that I first photographed him, and at that time I remember Mr. Edison had recently placed on the market his "perfected" phonograph, then a very different instrument to the one of today. I had always taken a great interest in the phonograph and had one of the first that was made. Salvini expressed great interest in the machine, for he had never seen one before; and he sat there for an hour listening to the various records. I had long had the idea of making a collection of the voices of celebrated men and women, so I asked Salvini if he would say a few words into the phonograph for me. He agreed at once, and, asking for a piece of paper and a pencil, wrote out a little speech in Italian. When the wording of the composition was to his entire satisfaction he made a "fair copy," and with this before him he spoke the lines into the phonograph. Then he listened to his own voice for fifteen minutes and declared that it was marvellous. After he had gone I found lying on my desk the manuscript of the little speech signed by the great tragedian, and this interesting autograph is now hanging on the wall of my smoking den at home.

"Salvini was not the only man to whom I had the pleasure of first showing the phonograph. The first phonograph that Rider Haggard ever saw was the one in my studio. I never saw a man more excited over anything in my life, and this from a romancer who had written marvels which will probably never be realized was rather astonishing. Of course I asked him to speak into the machine, and out of my bookcase I took a copy of 'Cleopatra' and suggested that he should repeat some of the utterances of that remarkable woman. He was perfectly agreeable, and I obtained a very fine record."

Continuing to turn the pages of this remarkable album we came across some world-renowned photographs of Sandow.

" I took several hundred photographs of Sandow," Mr. Falk said, "and I must have photographed every muscle in his body. I had him running round my studio for four hours one day, and just as soon as one muscle was brought into play I exposed a plate. I consider

these photographs make up one of the most interesting series of pictures in the collection.

"To my mind the two most beautiful women I ever photographed were Lillian Russell and Emma Eames. In their different types they were equally perfect. I was so successful in photographing Mme. Eames that for years she allowed no one else to make her portraits. Of Lillian Russell I suppose I must have taken at least eight hundred and fifty photographs, and at one time they sold literally in tons. She is still a very beautiful woman, but when she was younger she was glorious."

Mr. Falk's remarks on some of the characteristics of his sitters were interesting. It is somewhat surprising, for instance, to learn that President Roosevelt is one of the most nervous men that ever entered a photographic studio.

"He cannot sit still for two minutes," said Mr. Falk, "and he is a most difficult man to treat photographically. In many ways he is a splendid-looking man, but has very small eyes, and these never come out well in a photograph. He is very self-conscious though not at all conceited, but, like the majority of us, he always likes to look his best even in a photograph. Roosevelt is a very different sitter from Salvini, who was full of repose and quiet dignity.

"Mark Twain is another good sitter and seems to fall naturally into good positions. Moreover he takes considerable interest in the whole operation and even likes to see a plate developed. I took a number of photographs of Loie Fuller, and when I was depicting her in those wonderful fire dances I arranged for her to stand on a square plate of glass beneath which was a powerful arc light. By this means I secured some rather striking effects. One of the finest heads I ever made in portraiture belonged to Captain Shaw, of the London Fire Brigade. It sold at a tremendous rate, especially when "Iolanthe" was all the rage. Lord Kelvin was another good sitter and made an excellent portrait."

THE FIXING BATH.

BY F. J. MORTIMER.

THE fixing bath is undoubtedly the easiest and cheapest of all photographic solutions, and, although by no means the least important, is the one which as a rule receives the least attention from photographers generally.

It is always as well to obtain a good quality hypo, for the cheaper kinds are not only dirty, but in such large crystals that they are inconvenient. It is certainly not necessary to weigh hypo out at home. There is the chance of spilling it about the place, and the risk of it becoming dirt, or matter in the wrong place. Hyposulphite of soda can be obtained in small pea crystals packed in one pound boxes, the contents of which can be at once dissolved and form a stock solution. The most convenient bottles are the "Winchester quarts," which can be obtained from any chemist for a few cents, and which hold half a gallon. A pound of hypo dissolved in sufficient water to fill one of these will make a fixing bath of about the right strength for fixing negatives.

Making the Solution.

It should not be forgotten that when hypo is dissolved there is a big drop in temperature, and further, that a solution of hypo is always heavier than plain

water; therefore to put the hypo into the bottle and fill up with water simply means that the salt will be a very long time in dissolving, and will be even then too cold for use, for in certain cases a very cold fixing bath means not only slow fixing, but stains. It is far simpler to either boil about a quart of water in a clean enamelled saucepan, then add the hypo, and as soon as it has dissolved, which it will do very quickly, to add cold water till the solution is cool enough to bottle, and then fill up the same with cold water. Another and equally simple method is to use a large jug and pour successive quantities of hot water on the hypo, or else hang the hypo in a bag of linen or calico and allow to dissolve, pouring off the solution and using more water as the former gets strong. This filters out any dirt, but with the small crystals this is not actually required.

Plain and Acid Fixing Baths.

A plain fixing bath is perfectly satisfactory for all printing-out papers, but should never be used for any plate or paper which is developed. For these an acid fixing bath should be used. The special virtue in the acid bath is that it at once arrests development by neutralizing the alkali, and, further, it reduces the possibility of staining by oxidation of traces of the developer carried over into the bath.

Superior even to the ordinary acid fixing bath is that containing an alum, and preferably chrome alum, for, as pointed out by MM. Lumière, this hardens gelatine so much that very hot water can be subsequently used to eliminate the hypo. Some little care is, of course, required in the mixing of these acid fixing baths, because the addition of an acid or alum to hypo in solution causes immediate decomposition with precipitation of sulphur, which may even be deposited on the image film. The following formula may be taken as typical and satisfactory:

Acid Fixing Bath.

Sodium sulphite	¼ pound.
Citric acid	1 ounce.
Hypo	1 pound.
Water to	80 ounces.

Chrome Alum Bath.

Sodium sulphite	2 ounces
Sulphuric acid (concentrated)	¼ ounce.
Chrome alum	½ ounce.
Hypo	1 pound.
Water to	80 ounces.

The proper way to mix these is to dissolve the sulphite in about a pint of the water, add the acid, and in the latter bath also the chrome alum, and only when dissolved add to the hypo, which should be dissolved in the remainder of the water. When mixed in this way, the solution will be quite clear and free from any precipitate.

It has been stated above that these baths prevent stains on the negative and arrest development by neutralizing the alkali carried over by the prints or plates, but as a matter of fact there should be very little developer carried into the fixing bath if the plates or prints are washed, or rather, well rinsed back and front in running water, or at least dipped two or three times into clean water. This may seem quite an unnecessary piece of advice, but the trouble entailed is so little, and the extra life of the fixing bath and added immunity from stains so pronounced, that we strongly advise it in every case.

False Economy.

A fixing bath, whether acid or neutral, must necessarily in time become exhausted as regards its fixative powers, because it is essential that a perfectly soluble compound of hypo and silver be formed, otherwise the negative will darken or turn yellow and fade afterward. It is always advisable, therefore, to be fairly liberal with the fixing bath, and not be "penny wise and pound foolish."

Without entering too minutely into the necessary chemical calculations, one

may assume with a fair amount of safety that an ounce of hypo will thoroughly fix a dozen quarter-plates or prints. This would naturally be 5 fluidounces of the above baths.

Stains.

It is probably unnecessary to lay stress on the necessity of complete immersion of the film; still it will do no harm to point out that any portion of the film, whether negative or positive, which is immersed and then only partially covered with the fixing solution, will be invariably stained, and this stain is not always due to continued oxidation of traces of the developer, but to decomposition of the silver hyposulphites by the contact of the air and the formation of silver sulphide. Another danger in this partial exposure of the film is that the image may be then reduced, because hypo in contact with the air is a fairly energetic reducer.

Perfect fixation is a *sine qua non*, and the usual directions given by all plate makers to the effect that the plates should be left in the fixing bath for some minutes after the plate appears cleared, should invariably be followed. This ensures a more complete solution of the silver salts and a much more rapid elimination of the same in the subsequent washing.

Fixing Bath for P.O.P. Prints.

We have dealt so far almost entirely with the fixing of developed plates and papers, but when we come to deal with printed-out silver images, it is advisable, though not essential, to use a bath not quite so strong, and it is absolutely imperative to use a neutral or alkaline fixing bath, the latter being preferable. Working on precisely the lines we have already laid down as to using up a pound packet of hypo, the following would be a convenient method of making the fixing bath for P.O.P. prints:

Hypo.	1 pound.
Liq. ammonia fort.	½ ounce.
Water to	80 ounces.

For use mix 1 ounce of water with 3 ounces of the above. This avoids the necessity of weighing the hypo and measuring the water, if the large Winchester quart bottles are used as we have already suggested. Instead of the ammonia an ounce of carbonate of soda may be used instead. The purpose of these alkalies is to neutralize any possible trace of acidity from the toning bath or from the emulsion itself, which would inevitably cause decomposition of the hypo and consequently sulphur toning, which would mean a fugitive print. It must not be overlooked that the image in a printed-out silver print is far more readily attacked both by direct chemicals and atmospheric action than a developed image, though both are supposed to be metallic silver; but in the former case it is assumed that the silver is in a much finer state of division.

The precautions to be taken as advised above for developed images apply with equal if not greater force to printed-out images. With prints it is not possible from the nature of the support to see when the print is fixed; it is all the more necessary, therefore, to work by time; that is to leave the prints in the bath for at least ten minutes, and fifteen will not hurt if they are thoroughly immersed, and also to take care that the temperature of the bath is not too low.—*Photo. News.*

Watertight Varnish.—Brown resin, 8 oz.; beeswax, 2 oz. Melt together in a tin pan, and when quite fluid coat the dish, which should be quite dry and warm.

Waterproofing Wooden Dishes.—(*a*) Inside and out, two coats each of Brunswick black.

(*b*) Asphalt (1 part) in benzole (20 parts). Two coats.

THE PHOTO-SECESSION.

[THE Photo-Secession has on exhibition at its galleries, at 291 Fifth Avenue, an interesting collection of the work of Alvin Langdon Coburn. The portraits are wonderfully clever, and photographers who have an opportunity should not fail to see them. Even the New York *Sun's* art critic, who "holds no brief for art photography," admits that the portraiture is excellent. We reprint the criticism.]

The name of Alvin Langdon Coburn is favorably known here in circles photographic. He is proudly pointed out as an example of what "art" photography can do when brains manipulate films and camera. There is now an exhibition of his work at the Photo-Secession Galleries, 291 Fifth Avenue, that substantiates fully all the good things said by Bernard Shaw and other critics of Mr. Coburn's knack of securing surprising and unconventional effects. We hold no brief for "art" photography. At its best it falls far below mezzotinting or the personal needle of the etcher; at its worst—oh! at its worst it is a thing of smudge and distortion. Coburn is very ambitious, but avoids the fatal *pons asinorum* of the new men; he focuses not abnormally. His portraiture is excellent. The heads shown are Shaw, Rodin, Edward Carpenter, Gilbert Chesterton, George Meredith—a genuine interpretation of a noble profile —E. A. Abbey, Bernard Partridge, Arthur Symons, John S. Sargent, Frank Brangwyn, Henry James, H. P. Wells, and again Bernard Shaw. This time it G. B. S. *au naturel*, as naked as an oyster off the shell, though with more of a beard. After baring his soul to the multitude, in print and before the footlights, St. Bernard conceived the highly original idea of posing in imitation of Rodin's "Penseur." Coburn caught him on a plate and all London enjoyed the sight of the Celtic spiller of paradoxes sitting stripped of his artificial integument, his fist to his cheek, his legs clutching a rock. It is magnificent, and it is Shaw. The exhibition for this reason will attract mobs. After the soul the body of Shaw! Curiously enough he is not nearly so lank when *in impuribus naturalibus* as in his clothes. Then he is a loose-limbed, slender, gangling man with russet whiskers and a sardonic smile. Nude, George Bernard is neither muscular nor yet as meagre as one would expect from a nibbler of grass and carrots. He has a tiny "tummy" (tell it not in Gath!) and is not a model of athletic training. But he takes the pose easily, and that is an art not to be despised. With due deference to Rodin, Shaw, and Coburn, this photograph suggests a man caught by the tide on a lonely, surf-encircled rock; a man who is thinking hard about his vanished clothes and his chances for supper. It is the pictorial embodiment of "You Never Can Tell," and quite as unconventional.

THE PHOTOGRAPHERS' COPYRIGHT LEAGUE OF AMERICA.

NEW YORK, March 18, 1907.

EDITOR WILSON'S PHOTOGRAPHIC MAGAZINE.

DEAR SIR: Replying to your inquiry as to the present situation in Copyright matters, I submit the following:

Congress adjourned on March 4th without having taken action on the new Copyright Bill, although it had been finally reported by the Committees of both Houses. Its passage was blocked

by the fight of the musical people, in which not only a vital principle but also large monetary interests were involved. On this question there were majority and minority reports in both the House and Senate Committees, and the struggle was long and protracted and is not yet finished.

It looks now, therefore, as though the entire matter has been shelved until the new Congress meets next December, a long wait, for which all true friends of American Copyright are extremely sorry, as the existing laws are far from satisfactory and there is always danger in delays of this kind.

We hope, however, that with proper vigilance the good that has already been accomplished may be properly safeguarded until the bill comes up for a final vote; and in the meantime I desire herewith to convey the thanks of the League to those liberal and broad-minded members of our craft in every section of the country who responded so promptly when called upon to do their share and whose efforts contributed materially to the good results thus far obtained.

Yours very truly,

B. J. FALK,

President Photographers' Copyright League.

PROFITS ON PICTURE POST CARDS.

[That there is quite as much profit in the picture post card as Mr. Archibald makes out in his article printed elsewhere in this issue is fully proved by the letter below, which is taken from the current number of the *British Journal of Photography*. The writer refers of course to English practice.—ED. W. P. M.]

As I stand in a somewhat unique position with regard to the post card publishing, as a professional photographer, I should like to say a few words on the subject. I am the only photographer in this town, which has a population of 17,000, and I have a monopoly of the post card view trade with the stationers and tobacconists. About four years ago when the pictorial post card craze was beginning to show in this town and district, although late in the season, I did not sit and see others reaping the benefit. I knew that it was "grist" that ought to come to my mill, and I did not wait until somebody told me how to get it my way.

I took estimates for 100,000 collotypes right away—one from a London firm of printers, and another from a firm nearer home, who both print and publish, and who kept me waiting for about a fortnight, during which time I found that that firm had sent a man here to take a series of views for their own publication and were trying to get them into the shops. I wrote the firm about it, but they tried to smooth me over by saying they did the same in other towns, and pointed out what a large profit I would have, finishing up their letter by asking if I had any negatives which I would care to sell to make up their series.

I took no notice of their letter, but sent the order at once to the London firm, and went around all the shops and made an agreement with them to this effect: that I would supply them with between thirty and forty subjects if they would agree not to encourage outside publishers, at the same time binding all the shopkeepers to sell the cards at one penny each, and one shilling per dozen, so that neither they nor I would suffer from that cut-throat policy of cutting prices.

Six months or so later a firm of publishers wrote me for a set of six negatives, and another firm for a set of twelve,

neither asking any questions except the price. I had to hunt through a lot of old negatives which I would never have used, and sent off a selection to each, asking half-guinea for each. The money was back by return post.

These appeared on the market in due course, printed in colors. I wrote to one firm for their prices, but they would not supply me, owing to an agreement with the wholesalers. They evidently did not consider me a dealer. Most of the shops had a supply sent to them unordered, so I just took a turn round the shops and reminded those who had got the colored cards of their agreement with me. In two cases I withdrew my cards because of their persistence in selling the others, but I considered that I would have more gain than loss. One firm of wholesalers wrote me later for my prices, but I refused to supply them. I still hold the field, and have not much fear of being ousted. I have several other smaller places on the same basis. I do not compel them to buy packets of one of each view, as is usual with wholesalers, but give them any quantity of any view or views which they want, and I find this to be an inducement for them to support me. My cards are not retailed in packets, but customers have their own selection at a shilling per dozen.

Your readers may think that I stand in a unique position by having such a large town to myself, but I "suffer" more from photographers in other towns just at hand sending canvassers to this town. But this is how I "suffer": the canvassers from other towns take away all the third-class sitters, but in this I take a different view from most photographers. I do not reduce my prices and send round canvassers and starve myself, as most of them, I understand, do, but I put from 3s. to 10s. per dozen on my prices and get a better-class clientele, more work, and better pay.

"Professional" seems to think that professionals are justified in being averse to the post card, because it seriously affects his view-selling trade. True, it has entirely killed my view-selling trade (in fact, I helped it), but I make at the very least ten times more profit by the change. You say "you must admit the wisdom of his (the photographer's) hostility to the picture post card—because that branch of it which includes photographic portraits of celebrities has undoubtedly cheapened photographs in the eyes of the public and has thus lowered the prices obtainable by the less skilful professional photographers." I say it does not follow that the prices must be reduced. I do not use all my skill for my ordinary work, I do the work that I see takes with my clients. But supposing skill is wanting it is surprising what can be done by using the right printing process, using high-class mounts, and raising prices.

"Professional" is right in saying that photographers have themselves to blame if they supply post card portraits at much, if any, below his terms for other work the same size.

It is a great pity that those who do this class of work cannot see the harm they are doing, not only to themselves, but the profession generally. I do not even print real photo-view post cards for the retail trade.

Speaking to a brother professional last summer in a fashionable summer-resort, I asked him if he did not publish local view colored post cards, to which he said, "No!"—as if such a thing were beneath his notice—and he told me he got an order the year before from one gentleman for 150,000, but he would have nothing to do with it. He has a special line at his very door and takes advantage of it, using whole plates; and it also came out in course of conversation that he sold real photographic post cards from the whole plates. I

said that he would require to reproduce his subjects on smaller plates, and was surprised to hear that he did not reduce his plates, but exposed the cards in the camera, giving fifteen minutes' exposure. He seemed pleased at getting threepence each for them (six cents).

I do not stick to post cards as the only appendage to my business, but have taken up dealing in cameras and photo-materials for some years, and find it pays well. But of course I do not place my whole rent and expenses against this single line, as "F. M. S." seems to do in his estimate with regard to retailing post cards, which, I think, is preposterous. Mr. Corkett is much nearer the mark; but in this way it is only mere guesswork.

I must apologize for so long a letter, but I hope many of your readers may benefit by a hint or two which they may pick up. I may say that my latest venture is that of publishing a pictorial guide-book to a country district (the first of a series, which it is my intention to issue). In fact, my business in this town was a venture, having to build my studio. I was told it was a rash venture, as no photographer had stayed longer than from one to two years before me. I have now been thirteen years here and feel like staying another thirteen.

POST CARD.

THE PHOTOGRAPHIC JUDGE.

BY JOHN BARTLETT.

THE judges' lot is not a peculiarly happy one, anyhow. The dissatisfied will always have us distinctly to know that they of course did not expect commendation, yet always declare their judgment superior to the decision rendered.

A man in the private walks of life may be highly respected for his skill, good judgment, and honesty of purpose, but let him be so unfortunate as to allow himself to serve as a judge, and at once not only is his ability called in question, but even his probity and saneness of mind are doubted.

Some one has suggested, as a preventive of this inevitable dissatisfaction, to make the judges justify their decisions by a report embodying their reasons for approval or disapproval. But judges are not by nature more analytical in reasoning or logical in expression than the majority of other men. How many who are possessed of good taste can give reasons why certain things please them, any more than Falstaff could when challenged by Prince Hal? And yet their judgment is often sound and trustworthy and we are willing to rely upon their decisions; and so the whole thing comes to a question of individual taste, or rather a consensus of taste, for we hardly think any man would have the temerity to serve alone as judge, unless he was so armed with self-assurance or faith in his own convictions as to defy the anathemas of the disgruntled.

If we have faith in the judges' honesty let us abide by their decision.

But let us further justify the acknowledgement often made in candor by the judges that something besides the picture *per se* influences their judgment. Undoubtedly the finish of the photograph is a factor in enhancing the artistic worth or of setting forth more conspicuously the inherent good quality, somewhat eclipsed by its unadorned nature. The manner in which the picture is mounted and framed actually gives it

qualities which in its native simplicity it did not possess. The effect of the finest work may be greatly weakened or even completely neutralized by an incongruous setting. The appropriateness of the mount is not sufficiently considered, and fashion or whim dictates where reason and taste ought to dominate.

The percentage of photographers who know how to pose, or compose, is not as large as it might be, and so the photographer can hardly afford to dispense with accessories to set forth to the best his modicum of merit.

When one visits an exhibition he is apt to form the opinion that certainly there is no disputing taste among photographers in the selection of mounts, frames, etc. All sorts and shades of color not only are in dangerous proximity, but even mingle in the same frame without any seeming remorse for the violation of the principles of harmony—*Journal of Phila. Photo. Society.*

THOUGHTS ON POSING: A PHOTOGRAPHIC STUDY.*

BY J. M. BRIGHAM.

YOUR committee selected "Posing" for my subject. Perhaps they did so seriously. However, since posing takes high rank in popular estimate as an art of the portrait artist, the subject has interest for us.

There is, indeed, a kind of posing which is a very important subject for study and practice in the studio, but this is not the "posing" of the popular sense of the word. To explain: Light is the agency by which photographs are made; and to obtain light in quantity, quality, and distribution suitable for various persons and conditions, placing or posing of the subject is necessary.

Moreover, various special postures are suggested to the artist according to the type of his subject. For example, a too-fleshy person should not sit when having a portrait taken. I would even emphasize this kind of posing as an important and fundamental part of all careful portraiture.

But that "posing" as popularly understood is a subject of study by an artist is a serious mistake. As a matter of fact, the very opposite is true. Nothing so constantly defeats the ends of an artist as this conscious effort on the part of his subject to pose. The effort is to transform and the result is always strained and unnatural.

To deliver a paradox—The most artistic pose is the most artless.

The artist's ideal is the normal presence of the person—the presence of the soul, if you please, and this is all he seeks. It is the joy both of his heart and his art. Unhappily it is constantly eluding him by the affectation of posing.

The soul (in so far as it is manifest) looks and speaks through the face. Therefore, anything that blurs the expression of character in the face defeats the artist. True, the expression of the body in every line should harmonize with that of the face.

The face, like the rose, is the centre of an illumination whose glory is enhanced by the graceful support of stem and leaf, and if there is no restraint, from self-consciousness, the entire organism naturally falls into a harmonious whole. But the moment of an ostentatious pose

* An address delivered before the Woman's League of Battle Creek, Mich.

or expression marks the end of harmony. What prompts these efforts against which the artist has so incessantly to contend? Sometimes, as when manifest in dress, it evidently arises from a misapprehension of the elements of beauty. Sometimes it arises from an impression that the taking of a picture is a very serious business and depends for its success upon most strenuous efforts at self-transformation. This belief is more pronounced with the more thoughtless person, even ingenuous early youth is not exempt; for there we witness the unwise promptings of their elders.

Children are lead to believe that they assume an awful personal responsibility in having their picture taken. Accordingly an artist often finds it an impossible task to obtain a good picture of a young child. He finds it impossible to dispel the self-consciousness resulting from the parents' careful drilling them for the ordeal. Johnny has been carefully dressed for the occasion, and is already quite uncomfortable, but on the way to the studio Johnny has been admonished not to soil his clothes nor muss his hair, for he is going to have his picture taken. And when he gets there he must sit perfectly still, and must do this and he must not do that. Finally his hair, which most naturally is not laid smoothly, has a finishing application of water and plastered to his head. All the natural kinks are thus taken out of Johnny, and he is sleek and trim. And do you suppose he is not conscious of the fact? And do you suppose you can keep his consciousness out of his face, out of his eye?

The common source of these affectations is vanity, and here as elsewhere vanity always defeats its own ends. Most men and women visit the studio hoping to give their friends an exaggerated estimate of their comeliness, little suspecting that this idea must find expression in the face and therefore is its own undoing.

In the matter of attire, little thought is given in most cases to conditions favorable to photography. The only concern about dress is that it appear rich in quality, stylish in design, and have the air of expensiveness.

And usually every feature of all this adds to the mountainous difficulties of the affectation and extravagance of the face. A man will wait for his new suit. A woman will wait until the new gown is finished before having a new portrait, never questioning as to whether some older gown would not be more suitable for the purpose. Indeed the new dress is often the incentive to have the picture —"the thing of supreme concern," and as a result little else gets into the picture. The dress gets its picture taken and the personality is a sacrifice to adornment.

Great advances have been made recently in general methods. For instance, the older school of photography placed a subject dressed in black against a white blackground, and *vice versa*. This produced hard, harsh, and cold statuesque results.

The new school aims at a soft, lifelike appearance of the flesh. The old school reflected shadows up to the high-lights, giving harshness. The new school softens high-lights down to shadows, giving softness. The old school worked for extreme sharpness, the new to soften lines of definition. Observe how the newer method lends itself to simplicity, to the elimination of all that diverts from the face. By proper focusing all features of facial background they are softened and indeed everything is subdued and subordinated to the face.

As above stated, the artistic ideal is the expression of the personal presence in the illumination of the face. This is recognized by the modern school of photographic artists.

Concerning *form*: It is known to all students of art, that a natural and uncon-

strained form is infinitely superior to a studied one.

Of expression: One author says the securing of proper expression is the great test and measure of ability in the fine arts. Portraiture to be fine art must bring out the peculiar marks of individuality—must bring out the *permanent* characteristics which indicate the disposition of the man or woman and which show the mind in the face.

This is possible to realize only with the unaffected, or at a moment when the mind is free from ostentatious expression. A statement from a distinguished art critic covering both form and expression: "The highest art is the imitation of the finest nature—the imitation of that which conveys the strongest sense of the sublime and beautiful.

A List of Dont's.—Don't primp. Don't make of your hair such a spectacle that it attracts attention from your face. Don't color your face. Don't attract attention to jewelry. A wrinkled hand may be beautiful—one with a mass of metal and stones is not so. The consciousness that the rings are there is expressed in the face.

At the last meeting of the National Photographers' Association a photographer of national reputation related his experience with a subject which is only slightly more ludicrous than some of the daily experiences of every artist.

A woman past middle life had by some chance become suddenly wealthy. She applied at the studio for a sitting. One hand was heavily loaded with rings. Upon learning the price she decided to look further. She soon returned, however, declaring that though his price was higher he made his subjects look better, and so she preferred to pay the difference. She sat, and as she did so, persistently stuck up the ringed hand into great prominence. The artist finally asked her to dispose of the hand in some less offensive position. But she declined, saying that she thought she was paying him enough for the job so he could afford to take the rings too.

She had recognized the superior attractiveness of his work, but did not discern that the cause was in *elimination of inartistic features and insistence upon simplicity.*

Don't go to the studio with the purpose of taking your own picture or with a feeling of serious responsibility in the matter. It is enough for you to do to bring your own true natural self there. Let the artist do the rest. Don't make a dummy of yourself upon which to display frills and baubles. Don't wear the new dress because it is new. Wear the one best suited for the purpose. In nine cases out of ten some older gown is better, even a very old one, for the new one is very likely to be stiff and intractable. Soft goods that falls into flowing lines are best. Not to startle you, your nightgown would be your best gown for a picture if it were drawn to approximate the lines of the figure.

Chicago social leaders are now wearing kimonas in the studio. The results, though by no means ideal, are an artistic revelation to themselves and their friends and a mighty relief to the artists. A plain gown, without distinct figure, and of such softness as to fall in uninterrupted, sweeping lines, following the figure from neck to feet, is most suitable.

Don't wear a linen shirt-waist, with long sleeves, stiff cuffs, and high neck stock. Don't visit a studio for a sitting when you are not feeling well or when you are tired or hungry. Upon entering a studio don't add gray hairs to the artist by telling him you had rather have a tooth pulled any time than have your picture taken, nor ask him if his camera is insured. Don't prepare a child's mind for the mysterious performance of picture-taking, but lead it unconsciously into the studio, where it may find diversion among toys and pictures. It is the

artist's work to catch the opportunity, and the moment is when the child is *itself* and not a prompted statue, *prim* and *primped.*

Years ago I had an extreme illustration of this fault. A little boy had been especially well coached for the task. He was prepared to do his utmost to help the man out, and his efforts were indeed strenuous. I asked him to close his mouth and he sealed it with a pronounced pucker. "Not so tightly, my boy," I said, whereupon the mouth flew open to the limit. A painful case of self-consciousness in a child.

The list of don'ts might be continued indefinitely, but the list of do's, though a short one, will make an extension of the don't list unnecessary.

Concerning dress favorable to best photographic results: In case of doubt, consult the artist. Then, for your own sake, for your friends' sake (including the artist), ***bring your own true, artless, soulful self to the camera and you will not be disappointed.***

NEWS AND NOTES.

Photographing Flowers.—Flowers may be beautifully arranged and photographed on a plate of glass supported horizontally about a foot above a suitable background—a maroon or olive tablecloth for example; the camera supported on a framework in a vertical position, of course. Another satisfactory way is to interlace or fasten them to wire-gauze stretched on a frame—an ordinary window-screen will do—with a suitable background behind. For really excellent work of this kind orthochromatic plates and color-filters are necessary.

Stains on Developing Papers.—Stains on bromide and other gaslight papers can be avoided alogether by taking the following precautions: (1) The developer should not be used beyond the point at which it becomes cloudy; (2) old solution should not be revivified with new; (3) each print should be rinsed for an instant before consigning it to the fixing bath, and a quarter of an ounce of sodium sulphite should be added to each pint of the fixer; and, most important of all, (4) the hypo should not be used for two days in succession. The prints, too, should be kept on the move in the fixing solution, and no opportunity given for large air-bubbles to collect.

Sensitizer for Post Cards, etc.—Distilled water, 10 parts; silver nitrate, 3 parts; uranium nitrate, 30 parts; and absolute alcohol to 100 parts. The material, whatever it may be, requires no previous preparation beyond sizing. The solution must be brushed on, and allowed to dry in the dark—which does not take long. When printed it needs no toning, but is fixed in two or three baths of water acidulated with nitric acid, and washed. When warm tones are desired, the material is dried in front of the fire, or ironed on the wrong side with a hot iron. Very good results may be obtained with this on silk, pocket handkerchiefs, post cards, and other things besides. The solution must be kept in a bottle covered with opaque paper, or else in the dark.

Pyro-acetone Developer for tray development:

A

Water	16 ounces.
Oxalic acid	12 grains.
Pyro	1 ounce.

B

Water	20 ounces.
Cramer's dry sulphite soda	2 ounces.
Cramer's liquid acetone	4 ounces.

For use take one ounce of A, two ounces of B, and twelve ounces of water.

To Remove Pyro Stains from the hands or trays the following solution is recommended: Equal parts of chloride of lime and carbonate of potassium, dissolved in water.

Artificial Daylight.—Everybody knows that numerous attempts have been made to manufacture arc and other lamps which shall more closely approximate to daylight than the usual form; thus the flaming arcs, those brilliant yellow lamps which are so much used for outside shop illumination, are sometimes known as sunlight arcs, and the color of their light is far nearer to sunlight than ordinary diffused daylight. By their use colors are certainly seen better, but now it is announced that the Regina Arc Lamp Company, of Cologne-Sülz, have commercially introduced a lamp, the Helia daylight arc, which is a very close approximation to daylight. It is further stated that it uses 32 per cent. less current than the ordinary arc and that one carbon will burn for sixty hours.

A New Fixing Salt.—It is announced in the foreign papers that MM. Lumière, of Lyons, have introduced a new mixture of hypo and a chrome salt for fixing. This renders the gelatine of plates and papers insoluble, so that they can afterward be washed with warm water, and then both plates and papers can be dried by artificial heat. It is further stated that the new fixer is less likely to give rise to dichroic fog, and that it completely prevents frilling and blistering. This should be an extremely useful addition to our chemicals.

Painting Prints.—Some people like to paint or tint the ordinary glossy prints, and the following hints, given by the *Photo-Revue*, may be useful: P.O.P. and bromides may be easily tinted with chalks if they are first gently roughened with finely sifted pumice or cuttle-fish powder. For oil paints all prints should be sized with a warm 3 per cent. solution of gelatine, and this solution should be painted over the prints. A method suitable for water-coloring is to use a solution of white shellac, made by adding powdered white shellac, ½ ounce to 1 ounce of warm alcohol, and allowing to stand for forty-eight hours, then filtering and adding another ounce of alcohol. This solution should be applied with a spray diffuser as soon as the film is dry.

NEWS OF THE CONVENTIONS.

The Photographers' Association of New England will hold its convention in Boston on August 27, 28, and 29. As this is to be the Decennial Convention of the Association very special efforts are being made to ensure a record-breaking meeting from every point of view. A great effort is going to be made to increase the membership by several hundred new members.

The prize list includes a grand portrait class, 8 x 10 or larger, open to the world, one picture only needed for entry; a special grand prize offered; a portrait class, open to New England members—three prizes; genré class, offering three prizes; and landscape class, offering two prizes.

The Copley Square Hotel, less than one minute's walk from the convention hall, will be official headquarters.

Many interesting lectures and discussions have been arranged for. The dealers and manufactures will make a big display. The social features of the Convention will include a grand vaude-

ville entertainment, a boat ride in Boston Harbor, and probably a banquet. All the indications point to a great and successful convention. The officers for the present year are: J. H. C. Evanoff, Salem, Mass., president; Geo. W. Ames, Lynn, Mass., first vice-president; S. M. Holman, Attleboro, Mass., treasurer; and Geo. H. Hastings, Haverhill, Mass., secretary.

Photographers' Association of Pennsylvania, April 23, 24, and 25.—The eleventh annual convention of the Photographers' Association of Pennsylvania, including West Virginia, Maryland, Delaware, and the District of Columbia, will meet in Williamsport, Pa., April 23, 24 and 25, at the Park Hotel.

It has been the aim of the executive board to have an instructive and business convention.

We will have a great feature to offer at this meeting in the way of a school of photography, which will be conducted by the American Aristotype Co., of Jamestown, N. Y. They will have experts in all branches of the business to demonstrate and explain the latest and best methods of producing the finest kind of fine art photography.

No photographer within our territory can afford to miss this opportunity of seeing photographs made, from the making of the negative to the finished print, by the most modern and up-to-date methods.

Make a resolution now that you will attend this meeting. Look over our prize list; decide on which you will enter. Look over your negatives; pick out your best; make the best prints from them you can, and have them ready to send to Williamsport at the proper time; or if you do not find enough of what you consider fine ones, go to work and make some, and, above all things, do your best, for only from your best can you get a good comparison.

With the assurance that the officers of the P. A. of Pa. will leave no stone unturned to make this the eleventh annua convention a great and glorious success, I am, fraternally yours,

H. H. DETRICH,
Prest. P. A. of Pa.

Nebraska Photographers' Association, Lincoln, Nebr., May 22, 23, 24. This promises to be a meeting of great educational value. We will have with us such men as Mr. Felix Raymer and Mr. Frank W. Medlar, and their valuable lectures and demonstrations will be highly appreciated by every photographer who is so fortunate as to be present. Instruction and recreation will be so intermingled as to make the time spent at the convention very pleasant.

Besides the gentlemen named there will be others who will read papers on improved methods of doing business, which mean much to the progressive business man of today.

Letting well enough alone never placed a photographer in the front ranks. What was well enough for yesterday is poor enough today. Strive to surpass former records. Come to the convention; hear the lectures; see the exhibits; get into the field sports if you like; eat at the banquet, and go home filled with enthusiasm for your work.

ALFRED T. ANDERSON, Secretary.
Kearney, Nebr.

P. A. of Wisconsin. Next convention at Milwaukee, April 23, 24, and 25. J. M. Bandtel, 479 Eleventh St., Milwaukee, Wis., Secretary.

P. A. of Iowa. Next convention at Des Moines, April 9 to 12. G. E. Fahr, Bonaparte, Iowa, Secretary.

The P. A. of A. The Photographers' Association will hold its 27th annual convention at Dayton, August 6, 7, 8, and 9.

P. A. of Illinois will hold its ninth annual convention at the Palmer House, Chicago, May 6, 7, 8 and 9.

TRADE NOTES.

THE platinum papers manufactured by the CURTIS & CAMERON CO., Harcourt Gray and Harcourt Sepia—are being received with a wonderful cordiality throughout the country and we learn that the manufacturers are having an exceedingly busy time keeping pace with the increasing demand for these papers. Photographers who have not yet tried Harcourt Sepia should not fail to do so; the results will please them even more than the ease with which they are obtained.

EVERY advance in the speed of plates is of distinct advantage to the photographer; but when increased speed is also accompanied by increase in the fineness of grain, the advantage is many times greater, because finer grain means better detail, value, and gradation in both high lights and shadows. It means better negatives every time. If this is so, do not fail to read the advertisement of HAMMER DRY PLATE COMPANY in this issue.

THE PRIMERA PLATE MAGAZINE is the latest device for converting an ordinary camera into a magazine camera. Taking the place of six double plate holders it loads and unloads a dozen plates automatically and prevents any finger-marking or fogging of the plates. Reducing the bulk and weight of the camera outfit it will be welcomed by the view camera users. Price of the 5 x 7 magazine is $10.00. BURKE & JAMES, Chicago, are the sales agents.

A. J. JARMAN'S article on "Pure Chemicals in Photography" emphasizes the fact that it is the worst kind of economy not to use the best chemicals. "Eagle Anhydrous Sulphite Soda" and "Eagle Monohydrated Carbonate Soda" are of guaranteed purity, uniformity, and strength. Sold by GEO. MURPHY, INC., New York.

THE YUNIT CHEMICAL CO., of Rochester, have just issued a new catalogue of their high-grade photographic materials. Their goods, sold under the broadest guaranty, are sold direct from factory to consumer. This method not only means a saving on price, it gets the goods to the user in a perfectly fresh condition. The firm manufacture a line of developing papers, plates, and high-grade chemicals. A post-card will secure a copy of their catalogue giving full particulars.

THE "Jaynay Floating Clip" is a capital idea for washing prints and flat films. Consisting of a simple double-grooved wooden clip, with rubber band and hanger, prints are inserted and put into the washing tank, where they float around. The prints are thoroughly washed on both sides. They are very handy for tank development of cut films and will surely be very largely adopted. A dozen can be bought for sixty cents. They are imported and sold by GEO. MURPHY INC., 57 East Ninth St., New York.

THE "Imperial Dry Plate" made at Cricklewood, London, and imported into this country by G. GENNERT, New York, is making many friends here and the importations are steadily increasing in size. Their speed, freedom from fog. and ease in manipulation have placed them in the front rank of English-made plates, which is saying a good deal. The "S. S." brand is well worth a trial.

THE post-card craze is a long way from being worked out, judging from the figures given in Mr. Archibald's article elsewhere in this issue. Photographers who secure orders for any considerable number would do well to consult the ALBERTYPE CO., of Brooklyn, as to their prices and processes before going ahead and doing their own printing.

FROM a recent communication from the KALAMAZOO SHUTTER CO. we learn that the sales of their famous "Silento" shutter are increasing at a very rapid rate. A total absence of complaints would indicate that the "Silento" gives entire satisfaction wherever it goes.

THE ANTHONY & SCOVILL CO., makers of the well-known "Cyco" paper, have just issued a new manual of instructions and useful hints with a view to the obtaining of perfect prints. We understand that this company will shortly place on the market a special "Cyco" paper for the professional photographers. Further particulars will be given later.

THE HIGGINS PHOTO MOUNTER, one of the best photographic pastes we know, seems to have achieved an international reputation. An English writer on the mounting question refers to it as his favorite mountant and there are many photographers we know in this country who could not be persuaded to use any other. If you have not yet used it a small jar from your dealer will convince you of its great superiority.

VOIGTLANDER'S "Heliar" is a lens specially designed for the photographer who cannot afford to keep a large battery of lenses suitable for every occasion. While it has speed enough for instantaneous it has good covering qualities and plenty of depth for group work. The focus will be found to be right for the studio of moderate length. The photographer in search of a lens of this character and capability will do well to investigate the "Heliar" before purchasing.

SINCE the introduction of "Royal" Velox some few weeks ago we have had several prints on it submitted by our readers. It suits many different kinds of subjects and the warmth and richness of tone give very pleasing results. "Royal" Velox is evidently settling down to a long run of popularity.

EDITOR'S TABLE.

After many years' waiting Professor Beck's great work on *Art and Photography* is about to be published. The Baker & Taylor Co., of New York, have the book on press and will publish it within the next few weeks. Further particulars of this book will be given in our next issue.

The International Photographic Art and Picture Post-card Show will be held at Chicago on the six days following the National Convention at Dayton, Ohio., enabling photographers attending the convention to take advantage of the show, as a special train has been arranged for their conveyance. The show is to be largely photographic. In addition to the trade exhibitions proper, there will be special sections devoted to each line of photography, professional and amateur. President Van Deventer, of the P. A. of A., and I. W. Taber are on the Advisory Board to look after photographic interests.

The latest number of *The Photo-Miniature*, No. 78, on "Gradation in Printing Papers," has a very special interest for professional photographers, as showing the capacity of different papers for giving prints differing widely in character from the same negative: how to choose among printing papers, etc. The range of gradation in the different papers is shown by numerous illustrations. Many interesting facts concerning printing papers are brought out for the first time. The printing papers, their characteristics and pecularities, are fully described. In speaking of the carbon process we are glad to see the writer put in a special plea for its more general use. We can fully endorse the following: "This process is the one printing method which every photographer should master and know familiarly, as having the widest range of possibilities in color and surface finishes for all classes of subjects and requirements, and as being simple in manipulation and yielding prints of indisputable beauty and grace."

For many years the name of Barron Fredricks has been closely identified with the best professional photography in New York City, and we feel that it has suffered a loss in his retirement from photography. Mr. Fredricks, having become connected with an electrical manufacturing concern that demands all his time, has sold his studio at Fifty-eighth Street and Fifth Avenue to Dudley Hoyt, who thus realizes a Fifth Avenue ambition.

We wish to correct two slight errors which crept into Mr. Woodbury's article on Pyro in our last issue. In the table at foot of page 127 read (cry) instead of (dry); in similar table at the top of the next page read as follows: 0.025 ounce for .0025 ounce; 0.1 ounce for 1 ounce for both the sulphite and carbonate sodas.

The Rochester (N.Y.) Camera Club held its fifth annual exhibition, March 12 to 16, and secured a big entry and attendance. The feature of the exhibition was a loan collection of pictures by Curtis Bell, of New York, which were much enjoyed.

The Photographers' Association of Wisconsin have just issued a very neat and attractive souvenir programme of their Eleventh Annual Convention to be held at Milwaukee, April 23, 24, and 25.

One of our subscribers in sending in his renewal of subscription to the magazine for the next two years writes: "Of all the magazines I get, Wilson's leads them all." This is an opinion we have always held, but are glad to have it confirmed in such a practical manner.

We recently had an opportunity of looking through a batch of correspondence that passed between one of our subscribers and a New York lens firm advertising a cheap line of lenses as exceptional bargains and offering to send lenses on trial and to return money if not suited. The whole correspondence was a bare-faced attempt on the part of the lens dealer to get out of returning the money when asked for. Needless to say, the advertisement of the firm in question did not appear in these pages. We are careful not to accept advertisements from any but reliable and trustworthy manufacturers and dealers, and photographers who deal with firms advertising in these pages are sure of obtaining a square deal.

The Graphic Arts and Crafts Year-Book. The first *American Annual Review of the Engraving, Printing and Allied Industries*. Edited by Joseph Meadon and published by The Republican Publishing Co., of Hamilton, Ohio. Price $5.00. This is one of the most sumptuously gotten-up books we have had the pleasure of hadling in some time. Published in the interests of the engraver and printer, it contains many interesting chapters that should be read by the photographer. Section I, devoted to "Photography and Magazine Illustrations," has chapters on "Photography in the Professions," "Colored Photography," "Commercial Photography," and "Magazine Illustrating." An article on "Photogravure Plate-making and Printing" will be of special interest to those photographers who were fortunate enough to see the collection of photogravures made by Herr Duhrkoop, and exhibited at the last National Convention. The illustrations, most of them in color, are beautiful specimens of the latest reproductive processes. The letter-press is a model of beautiful printing. Special attention has been paid to the binding. It is bound in brown morocco with padded covers. As the first American Annual of its kind it reflects great credit upon its publishers and sets a very high standard for future volumes.

By M. A. Blazier, Lebanon, Pa.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV MAY, 1907 No. 605

THE NEW YORK CONVENTION AND ITS LESSONS.

THE Professional Photographers' Society of New York held its third annual meeting in New York, some few days ago. In many respects it was the most remarkable and successful gathering of professional photographers on record.

Its program of unique features was carried through in a most businesslike manner. Its meetings began at scheduled time and not a minute was lost to the man who had closed his studio and travelled some hundreds of miles to be present, or to the city photographer whose time is money.

It will repay officers and all interested in State associations to study the methods of this, the youngest, yet most progressive, State organization. Many of them can be adopted with considerable advantage. To mention some of them:

The Constitution of the New York Society, it would take too much of our space to detail it here, but a constitution that fosters the sectional idea yet presenting a solid front when unanimity is desired, is worthy of consideration.

The Single-print Idea, or rather the idea of placing each man's print on a line with every other print, makes for equality. The so-called "small man" is encouraged to send in his work because he knows that it cannot be forced to the sky line by more accomplished workers with "a pull." The so-called "big man" is not allowed to monopolize the best space with half a dozen large prints which may sometimes get there on the strength of his name.

The Fifty Dollar Prize for the most useful suggestion was an idea that was worth very many times its cost to the Society. Some ten or twelve capital ideas were brought forward and demonstrated for the benefit of every member. The ideas demonstrated showed how new work could be secured; how the work in hand could be improved and made more productive, and how apparatus and office methods could be introduced that would increase very materially the net profits of a studio.

The Studio Demonstration Idea reaches its highest point of usefulness in New York on account of the unusual number of photographers of the first class only to be found in a metropolis. It was a daring idea on the part of Pirie MacDonald to ask six of our best-known photographers to show their methods of working under the light to a crowd of competitors. That they consented is the greatest tribute the New York

or any other society has received to its coöperation and helpfulness. Of course, we realize that the photographers who stood round and saw Falk, Hollinger, or Garo work could not go home and make pictures that have made these men famous. They would at least go home with some very clear ideas of many things that ought not to be done which is always a good beginning to do the things that ought to be done.

Another important lesson the New York Society teaches is that a photographic society can be entirely independent and self-supporting. The only money that went into the treasury of the Society was the small sum paid by each member as his dues, and every expense that was incurred came out of these dues. The members were royally entertained without an appeal to the manufacturers and dealers for contributions to an entertainment fund.

The program contained not only the day's meetings, but a complete list of exhibitors with a number to quickly locate their print—a small thing but very convenient. We would specially recommend this program idea—we refer to the absence of advertising as well as its general convenience to the publicity committee of the National Association. Its 1st Vice-President could be more usefully employed than seeking advertisements for acostly "Review" that has so far benefited no one but its printer.

These are a few of the lessons to be learned from the last meeting of the New York Society. A careful reading of the report of the proceedings, printed elsewhere in this issue, will probably disclose others.

PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK.

The Third Annual Meeting, April 3 and 4.

The 1907 meeting of The Professional Photographers' Society of New York will rank as the most successful gathering of professional photographers ever held. From every point of view the meeting was a great success and President MacDonald's practical program was carried through with despatch, harmony, and a genuine feeling of good-fellowship.

The meetings were held in the Assembly Hall of the Metropolitan Life Insurance Company's palatial headquarters on Madison Square. The magnificent hall—an ideal place for a photographic convention—was very generously offered to Mr. MacDonald for the Society's use by the Metropolitan Life Insurance Co.

The single-print exhibit—each print on a line with its fellows, extending entirely around the spacious hall—made an exceptionally fine showing. A detailed description of the exhibition will be found elsewhere in this issue.

The first meeting, on Wednesday, April 3, was called to order by President MacDonald on the stroke of 10.30, as per schedule. The hall had been open an hour previously to enable members to view the pictures. Dispensing with the reading of last year's minutes the President read his address as follows:

President's Address.

We stand, as an organization, for two principles paramount to all others—first, the object of the Society is the betterment of the business condition of the proprietor photographer, the fostering of the art, as such, being relegated to a place of secondary importance.

We also stand as being self-supporting and independent and opposed to the acceptance of pecuniary assistance, believing that a business organization should be untrammelled by ties of obligation which would influence or hamper its actions, as well as believing that we should do and have nothing that we cannot wholly pay for.

This position was not assumed in arrogance, but as a sane precaution, to preclude the possibility of any interest acquiring an obligation from us which might become embarrassing.

This freedom we consider as essential to our existence and any curtailment of it has been most vigorously guarded against.

This principle is the opposite of that of any other of the professional organizations of the country; as a rule, they look for a large part of their financial support and entertainment from the hands of the interests which supply their materials.

It must be obvious that it has required careful management and a great amount of labor on the part of the Executive Committee to bring about a result, without the help of the manufacturer, which would in any way compare with the associations which have been virtually supported by them. But the result, which we will discuss later, we feel is sufficient to cause you much gratification—and fully repay us for the labor. The matter of correspondence from the President's office alone has involved some 1192 dictated letters, aside from the preparation, printing, and addressing of some 2078 circulars and other printed documents; but we have this collection of pictures, involving some 200 persons—more individuals are represented than is usual at a meeting of a National society. We have this magnificent meeting place, the like of which it has never been the privilege of a society of photographers to use, and one of the few rooms even in this great city where the requirements of the resolution which authorized the gathering of the exhibit could be carried out, as we were directed to hang the pictures in one line—no picture above or below any other.

We have a paid membership of over 200 at this moment, and more paying their first dues now.

We have in operation a Free Employment Bureau which has placed 62 workmen in the studios of our members in about six months, and many more have not had the courtesy to acknowledge the result of our work for them—a fault unfortunately common also to our members.

We have before us, aside from the benefits to be derived by the contact of men from different parts of the country, a series of demonstrations by six artists of the first rank, all of whom are justly celebrated, and the unique opportunity of being shown the treasures of the great Metropolitan Museum of Art by Messrs. Core and Hollinger, and a dinner where a plate is provided for every member of the Society—and all of this is being paid for by ourselves, out of the dues—surely you will be willing to credit the Executive Committee with devotion.

Lastly, I want to speak of the sections, because the sections are the most important item in our scheme of organization. It is through the sections that this Society must get its real power. The continued touch and the intimacy that is bred in the sections—the monthly contact and the monthly effort to smooth away the vexed conditions, is what is to prove the health-giving factor of our organization. Other associations have been formed and have seemed to flourish for a while—have met with more or less success for a while—but have finally "petered" out because the lapse of time between meetings was too great to have interest sustained, and each meeting had to be made out of whole cloth; but our sections, meeting monthly, have kept warm the interest; they have each grown larger and stronger, thus helping to hold together the Society all through the year.

The sections have been of use, however, not only in increasing the power of the State Society, but more directly in handling local questions, in knitting together through friendship and confidence groups of men all over the State—groups of men who have by the very nature of their competitive relation been antagonistic—they have come to regard each other as friends and to realize that there is a common interest which must be maintained, a friction to be reduced, with the result of more business more easily done, more pleasantly done, and a new circle of friends.

Difficulties that have been "discussed" by other associations have been solved in some of our sections; matters that required work and persuasion and confidence have been accomplished within this past short year that other societies have only talked over; and these results have been made possible only through this scheme of dividing the State into small independent units, held together by their common interest in the State Society.

No one capable of prophesying the exact result of the formation of sections happened to be a member of the committee who wrote the Constitution, and it is now obvious that there is not adequate provision for communication between the bodies—there is no completed scheme whereby the work of each may be of profit to the other, where the pioneer's work on a question need only be done once.

There is no complete arrangement for the working together to get any one result, or the dividing of a problem into divisions, so that each section may work out its given part and so save the necessity for doing it separately four or five times, and, worse than all, there is no provision for an interchanging of such courtesies which would make for that true cordiality which is the corner-stone of our existence.

The Executive Committee have earnestly discussed this problem and will put forward some suggestions and recommendations in their report which I believe should be given most careful and serious consideration on the part of all those who desire the real success of this Society.

While there are many of our members who will doubtless feel that we have as yet not accomplished a sufficient amount of definite result, it is my opinion that, all in all, we are in a most remarkably prosperous condition, considering the age of the Society; I feel that we are going slowly but surely to prove that our theory of organization is the only one which can continue to grow, until we have

involved every photographer within the State of New York in our membership. We should encourage the building of sections in every locality where photographers are close enough together to be in competition, in order that we may reduce to a minimum the instances where men are doing profitless work, in order that we may establish healthy rivalry through competition of workmanship rather than of prices.

Personally, I should feel perfectly satisfied if this meeting accomplishes nothing more than a deep and earnest desire for more complete organization.

The reports of the various sections were then read as follows:

Report of Executive Committee.

The Executive Committee would respectfully report that an Employment Bureau has been maintained since July 1st for the benefit of the membership, supplying names of help who want position, without charge, either to the membership or to the prospective employees. This Bureau has been managed from the office of the President. 164 employees have been listed. 62 positions have been found for them with members of this Society that have been acknowledged. Unquestionably many more employees have received positions through the agency of this Bureau, but there is a most unfortunate lack of courtesy on the part of many of them in failing to acknowledge the benefit that they have received or even answering an inquiry after they have attained their object. This is a fault also we are sorry to be forced to mention as applying to some of our membership who seem to forget that this service has been rendered them without charge, and that it is only fair to the Bureau and their brother members to notify us when a name should be taken from the list.

An excellent system has been devised for the elimination of the names, after thirty days, of those who fail to advise us that they are still in need of a position, though it entails an added amount of correspondence.

In the affair of the Employment Bureau there have been 544 dictated letters and postal cards; 130 lists of names embodying 560 names sent out from the office of the President, entailing a total expense of $23.75.

We have on the other hand obtained fifteen new members whose original object in joining was to have access to this list, whose dues amount to $45.00, which proves that as far as actual outlay of money is concerned the Bureau has been more than self-supporting.

It is the desire of the Executive Committee to acknowledge here the coöperation of *Wilson's Photographic Magazine* and the *Photographer* in printing the lists and to recommend that the thanks of the Society be tendered these journals for their help and courtesy in the matter.

This work has been carried on by the President personally in the effort to prove the value of such an institution and its feasibility. The Executive Committee feel that the contention has been successfully demonstrated, and would advise that a committee be appointed for the purpose of recommending a plan for the continuance of this work.

The Executive Committee have come to realize, as the result of their work of the past year, that the Section has become the most important factor in our scheme of organization, and that it is destined to increase in volume and influence.

They also realize that there is not sufficient provision in the Constitution and By-Laws for intercommunication between the Sections, and they would advise that some specific and rational plan be formulated to the end of creating a regular and stated intercourse, and that reports of the Sections should be compiled by some officer of the State Society and sent each month to the various Sections for their advice, encouragement, and stimulation.

The Committee would recommend that provision be made that the President visit each of the Sections at least once during the year of his incumbency.

The Committee is of the opinion that it would be wise to amend the Constitution so that the dues of such members of the State Society as are members of Sections, should be paid by the Sections. The dues being collected from the aforementioned members and forwarded by the Secretary-Treasurer of the Section to the Treasurer of the State Society, on or before February 1, with the list of such members as have paid and are, therefore, in good standing as members of the Section.

The Committee would also recommend that such members as are in arrears should be dropped from the rolls of the Section by reason of such arrearage without further action.

The Committee is of the opinion that a uniform constitution for Sections be recommended.

The Executive Committee would suggest that a a committee be appointed to discuss the suggestions herein contained regarding Sections and report such amendments to the Constitution or other procedure as would produce the most desirable results at the earliest possible moment.

Rochester Section Report.

NO. 3, P. P. S. OF NEW YORK.

To Mr. Curtis Bell,
Secretary of P. P. S., of N. Y.:

I hereby submit my report as Secretary of Rochester Section No. 3, of P. P. S. of New York.

Our Section has held regular meetings on the *first Tuesday* of each month. There were many discussions on topics of general interest, such as business ethics, the matter of advertising, etc.. and several demonstrations with display of members' work. At no meeting have we touched upon the price question, except in the matter of handling school work, and are pleased to report that the prices of work were so adjusted that we have received within 20 per cent. of our regular prices, instead of the 50 per cent. reduction that existed prior to our organization.

The following are the resolutions that were adopted in regard to the regulation of school work for 1907:

1. *Be it Resolved* that the members of the P. P. S. of R. will quote no lower prices to the committees of the various schools and colleges than the price set for the class in which their respective names appear.

2. *Resolved* that definite written contracts be entered into between the members of this Society and the school or class committees, and that a full list of the names of class, together with $1.00 for each name, be deposited with the member, before prices take effect.

3. *Resolved* that no further reductions of any kind whatsoever be made, and no concessions or inducements or promises of any description, either directly or indirectly, be made to Committee or any member of Committee.

4. Any member signing this agreement, and after investigation it is found that he has in any way broken it, shall forfeit his membership in the P. P S. of R. under Art. III, Sec. 6 of Constitution, and have his certificate revoked.

In addition to the utmost confidence and friendship that have been established, we have worked out, after much careful consideration, what is known as the Certificate Plan, the object of which is to elevate our profession in the *eyes* of the *public*.

Certificates for year 1907 have been issued, and are now displayed in our street show cases.

To obtain their certificates members submitted prints of their own work not bearing their name, to three judges, also photographers. The pictures were judged on their merits in lighting and posing and general effect, the last including mounting and finishing; and certificates were issued to all who obtained at least 75 per cent. of the total marks given. In considering the question of granting a certificate the grade of work was also an element. The man who charges moderate prices for his work, would not of course be expected to produce the grade of work of the higher-priced men. The aim is to certify to honest and creditable work and to give assurance of reliable treatment to customers. Our daily papers have made it plain to the public that we do not wish so control prices in any way, but that our membership is composed of reliable photographers in whom they can place confidence.

It is the sense of your members "Up-State" that we are decidedly "in it," and all are willing to do our share toward bettering the condition of professional photographers.

IVAN H. LUCE,
ROCHESTER, N. Y., 1907. Secretary.

Mr. L. M. Sherrow, of Ossining, gave the report for Hudson River Section, No. 4, in a short speech, no written report having been prepared.

The Central Section Report.

The Central Section take pleasure in reporting that they are glad to be identified as a branch of the Professional Photographers' Society of New York. We have spent another pleasant, profitable year together and, as a natural consequence, are a year closer together. Five regular and two special meetings have been held, all of which have been well attended. We entered the year with a lot of enthusiasm and a fair-sized membership of wide-awake hustlers, and the close of the year finds us with more enthusiasm and a goodly increase in our membership. . . . .

After all is said and done, the greatest benefit derived from our intercourse for the past year has been the development of a real, genuine regard for our competitor. We realize as we never have before that he is a good fellow, actuated by the same motives that we are and trying to solve the same problems that we are constantly running up against. We feel that the spirit of comradeship that has been developed is worth all the effort it has cost us.

E. P. WENDELL, Secretary-Treasurer. J. D. SHRODER, Chairman.

Ryland Phillips, of Philadelphia, here took the floor by permission of the president and spoke eloquently on the influence the New York sectional idea was having throughout the country. The few who came from Philadelphia to last year's meeting carried away the germ of the idea and started in Philadelphia an association based on the same lines as the New York Sections. They have now forty members and hold nine meetings a year. Mr. Phillips spoke of the enthusiasm engendered by these meetings and the good to the individual. He mentioned that they had never had more than three absentees at any meeting during the year. That was what New York's influence had done for the "slow old town of brotherly love."

The afternoon was spent by the members attending the demonstrations arranged for their benefit, by J. Garo, of Boston, at the studio of Curtis Bell and the following gentlemen in their own studios: Bradley, Falk, Hollinger, and Rockwood. To many of the out-of-town members this feature of the convention was perhaps one of the most practical and enjoyable of the different meetings.

We had the pleasure of making the rounds of all the demonstrations except-

ing Mr. Rockwood's, in company with President MacDonald, and can testify to the keen interest displayed by the members, all of whom realized the advantages of an opportunity of watching some of our best workers operate under their own light. This feature of convention work, original with the New York meeting, is one we hope to see largely taken up by the different associations throughout the country. Its adoption will undoubtedly help to raise the average and draw together the gap which exists between the front and rear ranks of professional photographers.

THURSDAY, APRIL 4.

The second day's proceedings began promptly at 10.30. The minutes of the previous day having been read, Paul Lotz, late, of California, and one of the sufferers from the late disaster, spoke briefly in praise of the work done by the New York State men on behalf of their San Francisco brethren, and urged the principle of fraternity which brought out such generous help.

Communications read by Secretary Bell were then followed by the leading feature of the morning's session, the competition for the $50 Gold Prize, for which there were eleven entries. The prize was voted to Mr. Stebbins, of Canisteo, for his method of making sinks of cement. This idea seemed to "fill the longest felt want" of any we have heard of in many years. Every photographer present seemed to have had trouble with leaky sinks judging by the almost unanimous vote accorded to Mr. Stebbins' idea. We give below some of the suggestions as being of practical value.

THE SUGGESTIONS OFFERED FOR THE FIFTY-DOLLAR GOLD PRIZE.

The Stebbins Cement Sink.

THE sink, of which Mr. Stebbins showed a section, was made of a mixture of cement and sand. A framework of half-inch boards was first built on the supports where the sink was to be placed, and on this a thick layer of cement and sand in the proportions of cement 1 part, sand 2 parts, was laid, about an inch thick. While this is setting an inner framework of half-inch boards, about two inches shorter than the outer one and about an inch shallower and without any bottom is made ready, and when the bottom layer of cement is set, this inner frame-work is rested on it and the tops of the inner and other framework are kept steady at an even distance of about an inch apart by little strips of wood attached at distances at the tops. This forms a mould between the two frameworks and the bottom layer of cement, and into this mould more cement mixture is poured and allowed to set. The whole forms a most permanent form of sink at a cost of not over $1.50 for one eight feet long. Mr. Stebbins figured that his sink cost 75 cents for labor and 78 cents for cement. Waste pipes should be put in place before the cement is put in and set a little below the surface of the cement to allow for shrinkage when the cement sets. To strengthen the sink, both sides, corners, etc., 10-penny nails or pieces of steel can be sunk in the sink, and if thoroughly covered will not rust. An old sink could be lined with cement in the same way. The cement sink showed no signs of damage from chemicals, etc., after the use of a year or more, and was thoroughly water-tight and the very cheapest possible.

Wendell's Printing Frame.

Mr. Wendell, of Albany, showed a printing frame such as he used in his studios. It was designed for a six-ampere arc lamp run on 110-volt current, or the ordinary incandescent lamp current. The electric light companies

supplied the lamps free, and the printing frames were constructed to carry five or six cabinet frames at once. The cost of current consumed was only five cents an hour, against the 35 cents an hour of the larger lamps, and the printing was effected in six or seven minutes. Several of these frames could be used in a studio, turning on one, two, or three, as the work required. The saving was quite considerable over the larger-size lamp.

Merrill's Wire-Netting Background.

Mr. Merrill, of Salem, Mass., showed a background frame covered with wire mosquito netting, gray being the best. Using black or white oil paints and gray ground, the only limitations the photographer has as to his background is in his individual capacity to carry out his ideas. The mosquito netting background can also be used to intercept too harsh a background behind the sitter. The expense of a 6 x 8 piece is about $3.00. The black or white oil paint is applied with a broad brush right on the mesh.

Evans on Making Pictures the Patron Will Want to Buy.

Mr. Evans, of Pittsburg, offered a suggestion from practical experience. Undertake and carry out as far as you can to make pictures that your patrons will want to buy. Business on a purely speculative basis can be carried on most successfully. Mr. Evans never lets a print go out of his studio without being entirely satisfactory both to the sitter and his or her friends. *Satisfaction or your money back.* There is nothing a man will buy quicker than a good picture of himself. Women are not in it with men for vanity. In groups of large sizes you never fail to sell a picture to every man in the group whose face is good. If bad, never attempt to sell them. The man who pleases his patrons makes money. The man who limits himself to two or three negatives loses out. Make good, and you won't have to worry about your bank account.

Wendell's "Control in the Printing Room."

Mr. Wendell, of Albany, offered as a second suggestion his method of controlling the work and the consumption of paper in the printing-room. He charges his printer with the paper sent into the printing-room and makes him account for it. He figures 6200 square inches of paper to the roll of 26 feet as a basis. The system keeps the printer to the mark and benefits him as well as his employer.

Phelps' "Post-Card Printing Frame."

Mr. Phelps, of Sidney, showed his post-card printing frame. It is a piece of apparatus consisting of a window-frame arranged to receive the negative and printing paper, and a wooden slide mask, operated by a handle, which cuts off the light from the negative. One hundred cards in five minutes can be made with this apparatus. A patent has been applied for.

MacDonald's System of "Following-Up" Orders.

Mr. MacDonald showed his card method of entering orders and following them through until finally disposed of and entered as paid or billed. He showed that, by a good system, it was impossible for any orders to get out of the studio unpaid for or uncharged. He had a set of three pigeon-holes, in the first of which the card was filed as soon as the first sitting was made. As soon as proofs were sent out, this was noted on the card and it was transferred to the second pigeon-hole. Here it

must remain until the order for finished pictures was received. The number of cards in the proof pigeon-hole was a guide to the state of the business. If any proofs stayed out too long it was easy to follow by reference to this pigeon-hole. The card was transferred to the third pigeon-hole when the proofs came back with the order. The cards in the third pigeon-hole had to show what orders were in the house undelivered or unpaid for. The cards themselves were divided up in spaces carrying the usual notices of name, address, date, style, etc., etc., and entirely took the place of the regulation register, which all too soon becomes cluttered up with a number of filled orders, among which it was difficult to find any particular order which might have hung fire for some reason or other.

A Valuable Hint.

Mr. Rockwood was not a candidate for "Golden Honors," though his suggestions are of great value to the fraternity. He referred to his method of making enlargements, which has been wonderfully successful in his own studio and been adopted by others with great satisfaction. His point was to make the positive at once to the size of the desired large negative—then, after retouching, accenting or alteration, which can be done to almost any extent—the large negative can be made in the dark-room by superposition, preferably in a printing frame. The cost is a trifle more, but the results amply justify the expense, as there is no suspicion that the negative is not direct from life. Mr. Rockwood's excellent 8 x 10's of children are all made from instantaneous cabinet-sized negatives.

Mr. Hollinger's Suggestions for Children.

Mr. Hollinger, in a most humorous speech, gave his methods of holding the attention of children while under the skylight. He suggested a variety of simple conjuring tricks with bits of paper and pennies, etc. He also recommended the use of glass balls instead of rubber ones for the children to play with. It was different and new to the children. This kind of tricks excited the child and got him into more and better positions than the ordinary whistling birds, etc.

THURSDAY AFTERNOON, APRIL 4.

The third session was called to order promptly at 2.30 Thursday afternoon. It was decided to hold a fourth session immediately after the close of the third session in order to be able to pass on the amendments to the constitution, the first reading of which had been crowded out of the morning meeting. After the reading of the minutes, the first order of business was the election of officers, as follows, the regular ticket, as presented by the nominating committee, being elected unanimously.

THE NEW OFFICERS.

President—A. F. Bradley, New York City.

First Vice-President—J. D. Shroder, Troy.

Second Vice-President—C. H. Smith, Rochester.

Secretary—L. Minor Sherow, Ossining.

Treasurer—Al. Lloyd, Amsterdam.

Mr. B. J. Falk was nominated from the floor for president, by Mr. Lifshey, but declined to allow his name to be acted upon. Mr. Baker was also renominated from the floor for treasurer, but likewise declined with thanks.

THE RESOLUTIONS.

Resolutions were brought in by the proper committee, calling for votes of

thanks to the Metropolitan Life Insurance Co., to the New York Camera Club, who had offered the use of their rooms for the meeting; to President MacDonald for his untiring work on behalf of the Society and on the Labor Bureau, and to the editors of *Wilson's Photographic Magazine* and the *Photographer* for their aid and assistance in furthering the Society and the Labor Bureau.

Messrs. Brown and Lifshey moved a vote of thanks to the Copyright League of America, and further moved that the League be authorized to represent the P. P. S. of N. Y. The motion was carried, and the meeting adjourned for five minutes.

LAST SESSION.

The fourth and last meeting was called to order at 3.40 Thursday afternoon. Mr. Hale, of Geneva, moved that the resolution concerning the exhibit of pictures adopted last year be re-enacted.

This was agreed to with the proviso that the officers were not to be tied down to the necessity of hanging the pictures on one line.

Mr. Hale also moved that the officers for next year arrange for a similar series of practical demonstrations for an award as were held in the Thursday morning session, and which were a great success. This was also adopted.

The amendments to the Constitution were then taken up and passed as given above.

Mr. Floyd Baker handed in the following resolution, which, after some slight discussion, was adopted:

Resolved, That at the next annual meeting the Executive Committee arrange a time, at least of two hours during the convention, in which employees can visit the exhibition and for that purpose allow each member to secure for his employees non-transferable tickets for same at 25 cents each.

Mr. Hale moved that votes of thanks be extended to each of the gentlemen who had given demonstrations during the State convention. Carried.

The convention for 1907 was then adjourned.

The Dinner and Presentation to President MacDonald.

Perhaps the most enjoyable session of the convention was the grand wind-up dinner given at "Little Hungary." Some 260 members and their wives attended. The gathering was remarkable for its display of good-fellowship and complete harmony. All present voted that it was a great success.

During the evening short speeches were made by President MacDonald, President-elect Bradley, B. J. Falk, Dudley Hoyt, C. L. Lewis, 1st Vice-President of the P. A. of A., Wm. Hollinger, Geo. G. Rockwood, and M. B. Parkinson, who presented to President MacDonald, in the name of every member of the P. P. S. of N. Y., a magnificent gold watch as a token of their appreciation of his great work in behalf of the Society. Mr. MacDonald in returning thanks said that had the gift come from but a few he would not have cared for it, but the fact that it represented every member of the Society he was particularly proud of it—as representing his pet idea, equality.

Thus ended the third and most successful meeting of the Professional Photographers' Society of New York.

Fine Matt on Glass.—Dissolve gelatine, 20 grains, sodium fluoride, 20 grains, in warm water, 1 ounce. Pour over glass, allow to set while level, and leave to dry. Then immerse in hydrochloric acid ½ ounce, water 8 ounces, for thirty seconds, and set up to dry. Fine matt on cleaning off the gelatine.

TANK DEVELOPMENT FOR PROFESSIONAL PORTRAITS.

BY C. H. CLAUDY.

TANK development has come to stay. It may be a little long in reaching its full estate among both professionals and amateurs alike, but that it will eventually supersede all other methods of development in 99 per cent. of exposures, is as sure and certain as was the march of the dry plate to almost universal use.

There must be a reason, several of them. As far as the professional maker of portraits is concerned, the reasons are as follows:

Tank development gives better negatives.

Tank development gives more of them (practically no failures).

Tank development saves time (which is money).

Tank development saves chemicals (which cost money).

Tank development saves labor (which costs money).

Tank development gets all there is in an exposure, out of it. Can the tentative developer always be sure of that fact in his way of working?

Tank development puts it "up to" the operator with no possibility of his blaming the developer.

Tank development saves temper and promotes health, as it entirely does away with the necessity for long sittings in stuffy dark-rooms—bad in winter but a vertiable Sheol in summer.

There is the case for this system of work. Now for the explanation and the proof.

Tank development is a very simple process. It consists in putting a number of plates together into a tank, in which vessel they are held in an upright position, and surrounding them with a weak solution of normal developer which is allowed to act for a certain interval at a certain temperature. The interval over, the plates are removed and fixed in the usual manner. That so simple a process can by any possibility be better than the old way of juggle, dabble, slop, and change from one tray to another, the skilled dark-room man will be loath to admit, but I am not making assertions only—I am stating facts proved and settled by the leading photographic chemists, the leading manufacturers of photographic goods, and the leading and most famous photographers the world over. The mere fact that the largest manufacturer of photographic goods in the world advises tank development should be convincing to any one who will think, even if he cannot believe the chemists and the experimenters, for why should a manufacturer advise this process, if it would not give his customers better results? Presumably he is looking for money and success and satisfied patrons, like the rest of the fraternity.

Any dark-room man of the old school will agree that a weak developer is the best in which to start an under-exposed negative. He will agree that a weak developer can not hurt an over-exposed negative. In tank developer you have the weak solution. So far the dark-room man will be satisfied. But he can not, usually, seem to see that an under-exposed and an over-exposed and a properly exposed plate should be left in the developer the same length of time. That is because he confuses the effects of exposure with development.

Exposure unalterably fixes the range of the tonal scale. If the exposure has been too short, the shadow detail is absent and the tonal scale is short and steep. If the exposure has been too long, the shadow detail gets undue prominence

and the tonal scale is long and low. If the exposure has been right, the tonal scale is right. Development fixes the scale of the tonal scale—the dimensions, as it might be put. Exposure determines the proportion between high light and shade, development the distance between them—the contrast in other words. To make this plainer, let us refer to an old simile, that of comparing development to a flight of steps. There are three steps. The lowest is shadow—the second, half tone—the top, high light. Each step is six inches higher than the one before. This distance is determined by exposure. Now if a carpenter comes along and makes the distance between each step twelve inches—their relative proportions are the same—but the distance between each is greater. The carpenter is the developer. He has built up on each step a different amount. He raised the second step six inches, to make it twelve, and he raised the third step twelve inches, to make *it* twelve above the second, and the first step he did not touch. That is prolonged development, which increases the contrast between tones in proportion to their exposure.

This being so—and the actual proof is watching a plate in the dish and seeing the lights come up first, the half-tones next, and the shadow last—it follows that all development does is to regulate the distance between the tones—the contrast of the negative. Incidentally, and only incidentally, the time of development regulates the density of the negative, which is an entirely different thing from its relative opacity.

Now let us see how this works out in the tank. We will take three plates. The normal exposure on some subject—any subject—let us say, is five seconds. We give one plate one second, one five seconds, and one twenty-five seconds. We put them all in the tank, with a certain developer at a certain temperature, and leave for a certain time, let us say half an hour. If we examine the first plate at the end of ten minutes, we will see little but high light, as might have been expected. The second, or correctly exposed plate is one-third through—all the detail is out but it is thin. The third or over-exposed negative is already black. Now suppose we fixed all these negatives, would any one be good? The first would be a high light in an expanse of glass. The second, a normal negative, one-third developed, would be too thin to print. The third, over-exposed, would fix out, of course, with no contrast. *None of them have had enough carpentry!*

At the end of the time when the normal negative is properly developed—at the half hour—if we fix all the plates, what do we get? The under-exposed plate has a good deal of contrast but some detail in the shadows; the normal negative is normally developed, and the over-exposed negative is very thick but it has contrast. Printed in its present condition or reduced it will give a passable print. Either of the three negatives, you must admit, will give a better print than the same ones would if taken out of the solution under-developed. But let us follow a third set through over-development, and see if we can improve any of the negatives. Can you improve a normal exposure by over-development? Of course not. Can you improve an under-exposure by over development? More emphatically, *of course not.* All over development does for under-exposure is to block the high lights and give a soot and whitewash picture.

Can you improve an over-exposed negative by over-development? Probably you never thought about it. Try it. We leave the plate in one hour instead of half an hour. Compared with the half hour, or normal development of the over-exposure, the prolonged devel-

opment plate shows greater density and *less contrast.* It has begun to develop *down* the scale again—in other words the high lights have stopped developing (because they are completely out) and the shadows, over exposed, have begun to build up to the high lights, decreasing the contrast as the density increases. And at this stage the negative is too thick to print from.

Now, if you can not improve a negative of either under or over exposure by under development, or by over development, why is not the case proved for a normal development for all kinds of negatives?

There is another side to this question which the amateur seldom sees. In the gallery there are two classes of exposure—that of great contrast, when a head is against a dark ground, and less contrast, when a white drapery for instance is against a white ground. It is customary to develop these classes differently. Now it has never been suggested by any sensible person that all negatives of all kinds can be developed in the formula of one man. Each man must adjust his own formula and time to what he wants in the negative—that once found, he can put all his negatives into his tank with the full assurance that he will get what he wants. If, on trial, you find that the tank development for both white and dark backgrounds gives you more or less contrast than you want, you can either alter the time of the developer or alter the exposure. But it is a simple matter to adjust things so that the same development for the same time will give you what you want in *results* from any varying exposures. By results, I mean prints. But as the time it takes you to make a print figures largely in your expense account, it may well be that you had best compromise with two tanks, one for one class of negatives and one for another class, in order that the relative density of the two sets will be similar, saving time and effort in the printing room. This suggested compromise is made as an offering before the god of commercialism, and in no ways controverts the facts that the results—the prints—*could* be obtained from the negatives made in one tank, if you had the time to use some thick negatives in the printing room.

Give the system a trial and you will discover its many advantages.

First, get a good tank. *Do not* use an old fixing box. A tank for 5 x 7 negatives can be obtained for two dollars.

Second, for a few days, make a sufficient number of duplicate exposures in the gallery to allow the tank to be tested without hurting your business if you make mistakes.

Third, make up this formula *fresh, and from dry chemicals,* just when you want to use it, and not before:

Sodium Sulphite	90	grains.
Sodium Carbonate	60	grains.
Pyro	30	grains.
Water	48	ounces.

It will probably take about 96 ounces (double the above) for one 5 x 7 tank—you can ascertain the exact measurement of your own particular tank and alter the amount proportionally.

Fourth, see that this solution is not more than 65° F. in temperature, and if the room is at all warm make it 60°.

Now, in the dark-room, put the plates in the racks, with films facing in toward the centre. Insert the rack in the tank, which should be full of the solution, move up and down in the solution a few times, to break bubbles, put on the cover, turn up the light and take the time. Let it alone for twenty minutes. Pour off development and fix. I imagine you will have a surprise.

But as I do not know what plates you use, how you like your negatives, or the conditions under which they were made, I do not pretend to say that this particu-

lar tankful will suit you as well as your own formula. I would suggest, *after* you have done this, that you take your own formula as usual, and develop a plate, as usual, taking the time. Then dilute it enough to fill the tank, multiplying the time of development by the amount of dilution. But do not expect too small a quantity of solution to do too much work. Strange though it may seem, 60 grains of pyro will develop a dozen 5 x 7 plates, but do not use less. In other words, do not dilute your own solution more than to the proportions of pyro per ounce given—1 grain to 1½ ounces of water.

Adjust your tank development in this way—increasing the time—or decreasing it, as you want more or less contrast. Do not alter formulas until you have done all you can by altering time. Once adjusted so you get what you like—stick to it, until you are thoroughly familiar with the process—then try experiments if you wish.

Now as to the saving of chemicals—with 1 ounce of pyro, 2 of carbonate of soda, and 3 of sulphite, you can develop ninety-six 5 x 7 plates. Compare that with your usual chemical output. It takes you half an hour to the dozen in the tank—and you can work as many tanks as you want at the same time. Your total time in the dark-room is the time it takes you to load the tank and put on the cover.

That it gives better negatives in the long run you can prove for yourself, as I and hundreds of others have proved. That it gives more of them, since you have no failures not due to exposure, it is obvious. That it saves time is self-evident. You could, with eight tanks, develop ninety-six plates in an hour. Try to do that with a tray! That it saves chemicals I have shown above. That it saves labor is also easily seen—if one man can develop a hundred plates in one hour, where it formerly took him half the night, it is obvious his spare time can be spent in doing something else. That it gets all out of a negative the exposure put in, is certain—see the opening argument about over and under developing any sort of an exposure. It puts the success or failures up to the operators, because, if all plates are developed the same way in the same solution at the same time and at the same temperature, and he gets a good result today and a poor tomorrow, obviously the fault is elsewhere than in the dark-room. It removes, in other words, one set of personal equations from a profession that is too full of them.

The American idea is always for the "square deal." Do not, as I said before, use a grooved fixing box and call it a tank—you will get into trouble one way or another sure. Do not use your own formula first—use mine first and then yours. If yours is not as good as mine in the results it gives, you will then know it is the formula. If you use yours first and get poor results, you will not know it—you will blame the tank. This is no diatribe against your formula—it may be the best in the world but unsuited for tank work.

Do not look at the plates while they are developing. One of the beauties of this process is the absolutely clean, clear negatives it gives, and looking at plates in a red light is not conducive to this absolute lack of fog.

Now, just to put you in a good humor as we close I want to confess that I am a convert to this system within the last two or three years. A professional portrait taker who stands very high came recently to me with a long face, a tale of a sick dark-room man, and a box of plates. "Would I help him out and develop these? He was sure they would be done to perfection." They were. I did them in a tank. Later he raved over my supposed skill to his partner and wished he knew how they were done.

SOME NOTES ON RODINAL.

G. E. C. MORRIS.

A NUMBER of workers have neither the time nor the inclination to make up their own solutions, and prefer to buy them in packages, or tabloids, in the concentrated powder form. Without wishing to decry some of the excellent package forms of developers now to be had of all dealers, there is no doubt that, good as they are in their way, they are somewhat expensive.

For instance, a package of metol-hydroquinone developer, costing say 10 cents a package, will only make up from four to eight ounces of solution in bulk, just sufficient to develop half a dozen plates, whereas if the metol and the quinol are bought separately by the ounce, and dispensed at home, four times the bulk, if not more, can be made up for the same money, and one has also the knowledge, if made up correctly, that the preservative is not stinted, and that the solution will keep well indefinitely, instead of rapidly discoloring and losing its power. Personally I have not found that package solutions, generally, keep at all well, even when dissolved in stoppered bottles.

However, be that as it may, they are undoubtedly convenient and portable, and the majority of amateurs will still continue to use them.

The subject I wish to discuss in this article comes under the category of portable developers, only it is the liquid concentrated form. The solution I refer to is rodinal.

To my mind this is a developer of enormous capabilities. Here we have a highly concentrated liquid, in a small three-ounce bottle, capable of being used alone by merely adding a sufficiency of water according to the strength and quantity of the liquid required. It is not necessary to add any soda compound to form an alkali, nor is any preservative actually necessary, except when the solution is made up and kept in a very dilute form; then it is advisable to add a small quantity of sodium sulphite, in the form of a 10 per cent. solution.

Rodinal seems to possess all the qualities of a well-tried developer, such as pyro, without any of the disadvantages of the latter. Being a single solution, it is not controlled in the same manner as a developer in two solutions, that is to say, by modifying the proportions of No. 1 and 2 respectively, but is controlled merely by the use of water and bromide. It may seem to some, who have become accustomed, by long practice, to a double solution developer, that latitude to any extent with a single solution is out of the question.

I admit this is so with most single developers, but it does not appear to be the case with rodinal. Density and detail come up simultaneously, not separately, as is the general rule with a double solution, especially when the alkali has been reduced or increased, to compensate exposure errors.

In over-exposure with most developers the image rushes up long before sufficient density has gathered, and in the event of under-exposure there is often ample density before all the detail has been brought up. With rodinal, the amount of alkali always remains constant, therefore the detail and density, otherwise the gradation, must remain constant also, no matter what exposure the plate has received. This seems to remove a great difficulty, when dealing with certain subjects where gradation

is a most important matter; seascapes, for example, when clouds are included, and interiors which suffer from excessive halation. Even with the latitude of a pyro-soda developer, used in skilful hands, an evenly graduated image does not always result. The makers claim that rodinal contains no excess of caustic alkali, so that the skin of one's hands is spared, and it is next to impossible to produce stains with it.

In regard to actual working details, there is one point above all others to remember, and it is that as rodinal produces a very clear light gray image, which appears to lose some depth in fixing, it is necessary to continue development much longer than with most developers.

Most people complain of being unable to obtain sufficient density when working with a normal strength of solution, viz., 1 in 20; this is entirely because they do not allow sufficient time for the solution to act. The image should show well through at the *back* of the plate before the plate is removed.

In fact, if the solution is fairly dilute, it is next to impossible to over-develop. A strong developer, although it will give density in half the time, is not to be recommended, because a hard result is bound to ensue; and, moreover, it is waste of material.

For a correctly exposed plate, with a 1 in 20 solution, very little bromide is necessary; in fact, it is preferable to dispense with it altogether, as a rule; but should the plate have been exposed to a subject of very strong constrasts, it is an excellent plan to double the quantity of water and add say six drops of a 10 per cent. solution of bromide.

Of course, development will be very slow, even without the restrainer, but the main function of the latter is not so much to retard the image as to prevent chemical fog. One would think the influence of bromide in any case would tend to strengthen the contrasts, which is what we want to avoid, but it does not appear to have that effect; added in small quantities in a weak solution it simply keeps the image clear.

When added in large doses in a normally strong solution, it would certainly materially assist in strengthening the contrast. Therefore it would appear, as before stated, to be necessary in the latter case, as rodinal produces density very quickly in a strong solution.

Rodinal is very useful for bromide paper, producing a clean gray image. Some workers say that good blacks are, however, unattainable with it. This is a moot point, however. Personally, I have obtained some excellent enlargements with rodinal as a developer.

The color was a rich dark gray, and when toned in the sulphide bath a most beautiful tone resulted.

As in the case when using it as a developer for plates, the color or strength of the image is more or less dependent upon the strength of the solution.

A normal solution consists of:

Rodinal	1 part.
Water	100 parts.

Two drops of bromide 10 per cent. solution are sufficient.

There does not seem to be that tendency to green tones, through incorrect exposure or excess of bromide, as is habitually the case with other developers. Rodinal may, therefore, be considered an excellent all-round developer for every class of work, and the amateur who wants a clean-working, cheap, portable solution should, to my mind, find it quite as satisfactory as the best and neatest form of package developer ever invented.

Rodinal is more extensively used nowadays than it was a few years ago, when it was not quite so well known. Many noted pictorialists use it chiefly as a stand developer, and for this method it has no rival.—*Amateur Photographer.*

ARISTO SCHOOL IN NEW YORK.

THE first Artisto School of Photography was held in New York, April 2, 3, 4, at the Geo. Murphy, Inc., Building. During the four days and evening sessions nine hundred photographers enrolled from the States of Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania, and a large representation was from the cities of New York and Brooklyn, and cities in Long Island and Staten Island. A large number of photographers attending the New York State Convention of the Society of Professional Photographers of New York, put in an appearance.

The school was under the management of Mr. F. L. Cornell, who made the sittings and demonstrated the Artisto lamp, and Mr. Frank Haslett, who demonstrated Artisto paper, making prints from negatives made under the lamp, manipulating prints in their different necessary handling, also making enlargements on the new Folmer and Schwing enlarging camera, used in conjunction with the Aristo lamp without the aid of condensing lenses. Talks on lighting, developing, demonstrating of the Aristo paper, bromide enlargements, posing under the light, were given with great success.

Thursday Evening, April 4, in response to a large number of requests, an evening session was held from eight to ten o'clock. Negatives were made and positions given under the Aristo light, and bromide enlargements were made with the Folmer and Schwing enlarging camera in connection with the Aristo lamp without the aid of condensing lenses, the light being obscured and broken through three ground glasses. It was a decided success, as the resulting enlargements met the admiration of all. This demonstration proved the practicability and adaptability of the Aristo lamp for portrait work.

In the manipulations given by the school, the Century Co.'s studio outfit was used, the Folmer and Schwing enlarging camera, the Percy King light controller, the Bausch and Lomb Unar portrait lens, and the 3A Ross portrait lens. In addition to the school a large exhibit was made of backgrounds, the finest in design that have been exhibited in this country to date. The grounds were made by the Rough & Caldwell Co., who also exhibited their latest designs in photographic accessories. These productions created universal admiration and the number of sales made demonstrated the approval of the trade.

A splendid showing of card-mounts of late designs manufactured by the A. M. Collins Mfg. Co., was also exhibited and many sales were made. Other specialties were on exhibition, such as the Eagle flash-lamp, the Eagle vignetter, the new hand-trimmer. The school closed on the afternoon of April 5, demonstrating that the first Aristo School of Photography held in New York was not only a success regarding the demonstrations and showings, but from a trade point it was also a success, and we are pleased to know that the large body of photographers went home satisfied that they had received great benefit for their trouble and expense in coming to the school, and that the managers of the Aristo School were also satisfied, and we ourselves are only too pleased to state that we hope to be able to introduce another school session before the year ends.

Respectfully yours,

GEORGE MURPHY, Inc.

NEW YORK.

By M. A. Blazier, Lebanon, Pa.

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By E. T. Billings, Racine, Wis.

By Chas. W. Jerome, Brookings, S. D.

By Ferd. Flodin, Stockholm, Sweden

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THE ONE-PRINT EXHIBITION.

BY SIDNEY ALLAN.

THE One-Print Exhibition as it was carried out this year by the Professional Photographers' Society of New York was an innovation; and there is no doubt to my mind that it has decided merits but also decided shortcomings.

As there was no jury, as every print submitted (conforming to the regulations) was accepted, as every exhibitor (excepting the foreigners) was represented only by one solitary print, and as all prints were hung "on the line," there was no occasion for any one to feel hurt at the treatment he had received. The arrangement was a strictly democratic one. It did away with all red tape, underhand politics, favors of the Hanging Committee (poor Milton Waide, he was kept too busy to show any favors), petty rivalries and futile (?) conquests, such as winning a prize, a cup, or honorable mention. Prints were there simply to be seen on their own merits.

All this is most laudable, nobody can deny it; but what is the significance, the educational value, of such an exhibition? Many a convention officer has spent sleepless nights in endeavoring to ferret out some method of exhibiting which would do away with the innumerable annoyances and complaints that occur during every convention. Here it was done. There could not be any complaints, except meaningless ones. One exhibitor might have considered his print hung too near the door, and another one his too far away from it. Of course such faultfinding is ridiculous. And yet, why did this particular exhibition not strike one as a big success? There was something decidedly tame about it.

Do the inventors and advocates of this system really think that nobody else has ever thought about it? I believe it has been in the mind of many a photographer, aweary of the apparently inevitable annoyances of the usual exhibitions. I have heard the subject broached and hinted at quite often during my various pilgrimages to State conventions. Why did these gentlemen not put their heads together and evolve something similar to the one-print exhibition of the P. P. S. of N. Y.? First of all, because they probably did not possess the same talent and energy for systematizing things as Pirie MacDonald has. All credit to him—he has stuck well to his guns. As he remarked to me: "It may be not exactly the right thing; but you can not blame me that I see to its being carried out as I intend to have it carried out." And so he did.

There is another reason, however, I believe, that some people who entertained the same or similar ideas about exhibitions as Pirie MacDonald, did not think this innovation *feasible*. I am of this opinion.

Of course, the one-print exhibition has taken place, met with some success, and will no doubt be tried at other conventions. But I do not think such exhibitions feasible in the long run. Exhibitions of this class (as I will directly prove) offer no incentive and serve no special purpose. Exhibitors do not gain anything by exhibiting and in time would cease to contribute.

What are exhibitions held for? Primarily, *to display a man's work to the best advantage.* The exhibition of one print can do justice to no man's work. A photographer's work is best shown by a fair average. What, for instance, has secured the Falk print an international reputation? Nothing but the

average excellence of the thousands and thousands of prints that have left his studio. An unknown man may show up well with one print (better than his routine work warrants) but he can not convince others that the exhibition print is an example of the standard of his average work. A group of six or three prints is by far more convincing. There a man can show his different styles. And one can take for granted that if a photographer, for instance, shows four out of six prints of equal perfection and two, although they do not come up to the work of the others, of decided merit, that these six prints give a fair idea of the exhibitor's ability. Of course, this is not infallible, as we all know who have attended conventions. But of the two evils it is the lesser.

The critics, or, as exhibitions are not held especially for critics, let us say, the man with a critical turn of mind at a one-print exhibition is at loss what to say. There are, for instance, many old acquaintances. But they do not impress one as such. One hardly recognizes them. Strauss surely was not represented by a print that looked more like a Coburn than a Strauss. Falk is surely not known for snap-shot pictorialism. Even Pirie MacDonald was not himself, excellent in soft flesh quality as his old man's portrait was. Then again, R. J. Dooner, of Philadelphia, sent a print—by-the-by one of the very best the show had to offer—that was remarkable for its fine decorative quality. One would naturally be inclined to think that all his work is more or less on that order. Is that the case? Another instance: W. S. Ellis, of Philadelphia, was represented by an excellent character study of Susan B. Anthony. Its only fault was that it was a trifle hard. Shall we gather from this one example that all his work is a trifle hard? It would hardly be just.

There is a further difficulty. With 215 prints or more, each by a different person, it is absolutely impossible to get at a man's personality. The effect is simply bewildering. One can take every print merely on its merit. This in itself may look like an inducement. But is it? How can we remember the separate merits of 215 prints. Nobody wants to, you might say. True enough. But how about those that, for one reason or other, attracted our attention. I believe even at this early date the memory of most people who have visited this exhibition will be rather defective. Let me put it to a test. Of course you have not forgotten the Hollinger print (form, well composed; effective). I heard at least half a dozen people say that it was about the best one there. But how about the others? Let me mention a few prints that I liked. A good specimen of interior photography by W. D. Daymon, of Mamaroneck, N. Y., specially noticeable for concentrating the light on the child. It was a mother and child picture. An old woman with folded hands by H. Schervee, of Worcester, in which the shirt was a trifle too light. A gentleman in a white vest, by W. L. Mitchell, of Middletown, N. Y. A conscientious study of a lady in evening dress with ermine embellishment, by Allen-Barker Studio, Newark, N. J. A very fine pictorial stunt of a young girl with large goo-goo eyes, by our presidential candidate C. L. Lewis, of Toledo, Ohio. The silhouette-like effect of a young girl in black against a white background by Geo. Kremer, of Buffalo, N. Y. A young girl with boa, excellent in value and well posed, by W. E. Marshall, of Arlington, Mass., etc., etc.

How many of these pictures, dear reader of these lines, can you clearly recall to your mind? And does your memory serve you any better when I mention the names of Frederick Robinson, William Edward Newton, Ryland W. Phillips, J. E. Giffin, S. H. Lifshey,

Dudley Hoyt, Curtis Bell, J. S. Mock, Henry Freed, A. L. Bowersox, F. W. Medler, F. W. Tyler, etc.—whose names I marked in my program for the more or less pronounced excellence of their prints?

Notwithstanding it was absolutely impossible to form an idea of these gentlemen's work—unless one happened to be acquainted with it from former occasions, and even at conventions not all people know each other.

The prints we all remember, however, were the "Five Stein Devotees," by J. Will Kellmer, of Hazelton, Pa., and the "Old Man and Woman," by F. A. Rinehart, of Omaha, Nebraska. Why? Because they were not portraiture in the ordinary sense, but rather genre studies. They stood out by their subject matter alone, and it is hardly fair to the rest of exhibitors to allow such pictures to be entered in a portrait show. No ordinary portrait can compete with them; the story-telling picture always wins out.

And then there were those prints that really represented the exhibitors as we know them.

They were by Schloss—a lady with the train of her dress twisted about her in the old-time theatrical fashion, rising from an opaque mass of darkness; Edmonson, well known by his bride specialty; and Goldensky, with the portrait of a peculiar type of an old man, depicted in his usual picturesque style. The exhibits of these three men had the true ring to them. They knew the leading characteristics of their own work, and sent in an honest example of the average quality of their annual output.

The rest did not convey that idea, although the intention may not have been lacking. It is exceedingly difficult to select one print out of thousands and to say: "This is truly representative of me." It might be done in a group, hardly ever in a single print.

And for that reason the one-print exhibit did not bring out or accentuate individual merit. The exhibition had to be judged as an entity rather than for the efforts of individual workshops. As an exhibition of what the photographers of New York State can do, it was instructive. Of course, it would have been to the point if no out-the-State men had been admitted. But even as it was it gave a fine idea of the general trend of photography and what we Easterners are doing. It was in a way as good a State exhibit as I have ever seen.

Pirie MacDonald can rest on his laurels. They are well deserved. The one-print exhibit, however, is at present to be looked at merely as a bold experiment, and only future tests can prove whether it is really a solution of the exhibition problem. I am not a photographer, merely a sympathizer and friend of the profession. The boys have to decide that for themselves. They, I suppose, know (or should know) best what they want.

In my humble opinion the group exhibit, despite all its shortcomings, particularly the lack of space to treat all alike, is superior to the one-print exhibit. I even favor awards, as competition is one of the best incentives toward producing better work. There must be an incentive to produce good exhibitions in the long run. It must strike home somehow. It is human nature. To be allowed to work for the general good is not sufficient. And if there are no awards the exhibitor must at least have an opportunity to display his work to the best advantage.

Blackening Brass Work.—Prepare two solutions. Copper nitrate, 200 gr.; water, 1 oz. Silver nitrate, 200 gr.; water, 1 oz. Mix, clean the articles thoroughly, and then place in solution. Remove and heat strongly.

SOME EXPERIENCES OF A PROFESSIONAL PHOTOGRAPHER.*

EVERY business man who deals directly with the public has experiences which are interesting and amusing. The professional photographer has, perhaps, more than his share of these, and, doubtless, many "knights of the camera" could speak interestingly of what they see and hear from day to day. We are told that "the proper study of mankind is man," so it may not be undesirable to look at him as he appears when in process of being immortalized. Man here does not, of course, refer entirely, or even mainly, to the male persuasion, as the photographer's most numerous and most charming patrons are those of the gentler sex. Which is, of course, what should be!

It might be well to speak first of the difference between men and women from an operator's point of view. A distinguished operator, from whom I learned much, was often asked by his lady clients if he did not prefer men because they were less troublesome. "Madam," he would diplomatically reply, "while men are certainly easier to photograph, we find the ladies much more interesting." And this is a true statement of the case. It is a well-known fact that expression is the great difficulty in portraiture. Men do not show their feelings in their expression so readily as do women, and a moustache often hides the most expressive feature of the face. So that a characteristic portrait of a man is usually not difficult to get.

A woman is more affected by the preparations incidental to the photographing, and, by the time the exposure is made, she is often looking most unlike herself. A tactful operator contrives to minimize the prominence of the necessary preliminaries as much as possible, and seeks to make his sitter feel at ease. But with some people there is always difficulty, and every photographer is familiar with the person who has never had a successful photograph. But, from the fact that they are often difficult subjects, and because of their natural charm and grace, women are always interesting to photograph.

But there are more than men and women in the world. There are children—and there are babies! Some people may go through this world unconscious of the fact that there are babies in it, but they are not professional photographers. Something must be said, then, about the photographing of that important personage—Baby.

Photographing "Baby."

The scene is an everyday one. The happy mother, after spending perhaps the best part of the forenoon arranging the draperies, fineries, etc., so dear to the feminine heart, and so indispensable to every well-regulated baby, bears her precious burden off to the studio. She is full of hope and anticipation that baby will be "so good" and will sit "so nicely." Alas! how frequently those anticipations, colored by a mother's love, are not realized. How often, after wrestling for an hour or more with one of these little cherubs, the poor photographer is left a physical and mental wreck.

In babies, as in most things, we find differences. Some there are with bright happy faces and flashing eyes, who are full of life and mischief. Others are doleful and melancholy, and seem, thus early, to take a pessimistic view of life. All their actions are suggestive of a mind fully alive to the sorrow and vice of this wicked world.

* A paper read before the Edinburgh Photographic Society, by T. Drummond Shiels.

There is also another important difference in babies: the difference of sex. The photographer, after long experience, when speaking of the little angel, uses the word "baby," or the safe word "it." The necessity for this is obvious: a sweet little baby comes in, whom, by its mild appearance and artless ways, you take to be one of the gentler sex, and, in speaking to the mother, you say suggestively, "A little girl?" The mother straightens herself up, and with scarcely concealed scorn in her voice, replies, "No! he is a boy!" Muttering apologies, you retire discomfited, vowing that you will never risk a guess again. I have been informed that the different sexes may easily be told by the difference in the pinafores worn, but this is too dangerous ground for a mere man to venture upon, and he will probably be well advised to avoid it.

An important consideration in the photographing of babies is the mother. If they and the sundry female relatives who come to take part in the great event could be quietly removed from the room for a few minutes, there would, in most cases, be no trouble. But when the critical moment arrives, and you are trying to get an exposure, you find that the aforementioned ladies in various stages of excitement, are vying with you in the effort to attract the attention of that one and only baby. And while, from all parts of the studio, come strange and wondrous noises, the object of interest is perhaps deep in the study of some problem of the mysterious world of infancy, and quite oblivious of the commotion of which he is the innocent cause.

Or again, with wondering eyes, his gaze wanders from one to the other of the gesticulating circle, and, after vainly trying to understand it all, he retires again to the solitude of his own thoughts.

A natural and justifiable weakness of mothers is their undue anxiety as to the likelihood of baby falling. When, perhaps, you are about to open the shutter, the mother, with a whoop worthy of a Red Indian brave, rushes in and saves the child from an imaginary fall. And while you gently remonstrate with her, she is perhaps persuaded to stand far enough away to prevent her also coming into the picture. But the stifled groans and murmurs which come from her direction show how great is the maternal love, and how large a place her little baby holds in the mother's affections and anxieties.

Very often, of course, there is little difficulty in photographing babies. And child pictures are generally very satisfactory and pleasing, because of the absence of the self-conscious expression which is often so noticeable in the portraits of older people.

Some Types of People Met With.

A professional photographer comes across many interesting people. There is the man who informs you, with a warning tone in his voice, that he knows something about photography. You are supposed to infer from this that it is no use attempting to deceive him, or to practise upon him any little tricks of trade.

An occasional visitor, too, is the bright little lady, whose deportment does not suggest the stage, who has cut out a portrait of some famous actress from an illustrated paper, and who asks to be taken in a similar position, generally one which is not quite suitable for her.

There are also the people whose features are not exactly Grecian, who insist upon being taken side face, because they have seen a profile of some one else, which they admired.

A difficult subject is the elderly lady who comes back with her photographs, and tells you that she knows she is stout, but asks if you think she is really as stout as you have made her.

The man who wants his proofs specially hurried as he is going abroad on the Tuesday, and who comes in on the Wednesday to resit, is also sometimes met with.

There is also the person who does not wish to be "touched up," and the person who does not object "to being improved a little."

And there is also the person, who is, however, very seldom met with, who does *not* compare photographing with a dental operation.

Speaking broadly, there are two classes of patrons which every photographer has, more or less.

The first class, of advanced artistic taste, prefer low-toned pictures, and do not object to broad effects and a minimum of detail.

And the second class, which includes the great majority of the general public, who like a "clear" photograph. While softness and an absence of glaring outlines are admired, a certain brightness and clearness of detail are also demanded. And it is often a difficult matter for the photographer to reconcile commercial considerations, which demand the catering to different tastes, with the observance of a certain artistic standard. If the commercial side is pushed too far, the artistic side must suffer. And if the desire for artistic effect is carried to extremes, it inevitably means a great narrowing of the circle of possible clients.

Different Operators.

Photographic operators are themselves an interesting study, and present many different types. Some are meek and patient. At least I have been told that this is so, and I hope some day to come across one. I have even been told, on good authority, that there are those who will go down on their hands and knees and play with a child for half an hour, just to gain his or her confidence. Such a man is a true artist, and deserves our admiration, but life is too short to allow most of us to indulge ourselves in this pleasant recreation.

Some operators I have known have not been meek and patient; very far from it. They made what seemed to them a reasonable effort to conciliate the affections of children they were photographing. If this had not the desired effect, they retired to the back of the camera, and there relieved their feelings in the way men do who feel strongly.

Some operators, again, are very cool and collected (and once more I am speaking almost from hearsay), while others can hardly be so described. An assistant who is working the camera for an excitable operator has no sinecure of a job. His views of the sitter or sitters will probably be only momentary, and when the posing is completed, the operator will express his surprise that his assistant is not ready at precisely the same moment.

One talented operator whom I had the pleasure of assisting had a very restless disposition. When things were quiet he developed a weakness for painting backgrounds, the troublesome preparations for which I had to perform. After much sketching and color mixing, the background became a reality. So high was his standard of excellence, however, that the result of his efforts seldom pleased him, and the background had to be taken off the stretcher, put in a tub, scrubbed, and stuck up again ready for a new attempt.

The man who came after him had, strangely enough, quite a different disposition. The intervals between sitters he spent on a sofa, slumbering peacefully. And, while his energy could not be so much admired, we, as his assistants, found that his habits relieved us of a great deal of mental strain.

Many others could be described, but space forbids.

Nature of the Work.

The reasons for liking or disliking photographs are often very curious. Sometimes the photographer is disheartened by the fact that his best efforts do not please. Work which he is proud of turning out is brought back for some trifling fault of dress, or for reasons which are never apparent. One man I remember came to resit for his photograph, which was really an excellent portrait. On being asked the reason, he said that, while he and his friends were highly pleased with the photograph, his wife thought she would like to see how he looked with a white tie instead of a black one! In this case, of course, the man was only obeying orders, and could not be blamed. The feminine weakness for detail was alone responsible. Such little incidents develop, or rather should develop, in the photographer that supreme virtue—patience.

However, on the whole, the professional photographer is fortunate in the appreciation which his successful efforts receive. People are very grateful for a good photograph, and the knowledge of this makes a man put forth his best energies to do full justice to his subjects. "Man does not live by bread alone," and this appreciation of success, which is independent of pecuniary considerations, makes the work interesting and attractive. The constant succession of new faces is also extremely interesting, and a student of human nature has abundant material for study.

Conclusion.

It is doubtful if the average professional photographer appreciates to the full the dignity of his calling. Photography today is an economic and social necessity in every community. It maintains the memory and affections of family life through the pictures it makes, and which we could not now do without. How often is regret expressed that no photograph exists of some friend or relative who is no longer with us? Sometimes, indeed, the camera has to intrude upon the sacredness of the death chamber itself, when relatives feel that a photograph in such circumstances is better than none at all.

Portrait photography, altogether, has much of pathos as well as humor in it. Human life is fleeting and uncertain, and it is touching to see an old man or woman, on whose "day of life the night is falling," being brought by the family to be photographed for what must be the last time. Photography is truly—

"The art that secures the shadow
Ere the substance vanishes."

ARTISTIC PHOTOGRAPHERS.

[PHOTOGRAPHERS who print the legend "Artistic Photographer" must be prepared to be held up to scorn should they ever descend to ask for settlement of an overdue account. The following amusing letter was recently received by Mr. C. L. Lewis, of Toledo, Ohio, First Vice-President of the P. A. of A., after a request for settlement of a small account. It was the line "Artistic Photographer" which aroused the ire of Mr. Lewis' correspondent.—Ed. W. P. M.]

C. L. LEWIS, Toledo, Ohio.

"Artistic Photographer."

MY DEAR SIR: Like a blessing and a benediction, or a breath wafted from those enchanted isles where waving

palms lifted their fronded tops in air, and airs that breathe from Paradise upon a world of crime—and like many other things which I can't quote—came your bill and annotation. I like the naive originality of bills—some on red paper and some on blue (a most appropriate color) and yellow and white, but be the color-scheme what it may, there is always that freshness, a new surprise, an exhilarating newness, that to one world-weary and sick of the sameness of things is as a cooling draught of frappéd wine to a man in hades. Heaven send us bills! (I cannot at this moment recall any other place from which they do not come, now.) They are the bright beacons that light the dark days and pierce the gloom of nights from month to month. Who would be without them? (Who on earth can be?) So I say, Blessings be upon the head of whoever it was that invented bills, and triple garlands of blessings upon the head of him who shall discover a method of paying them. What would life be without the busy Bill. One might be tempted (were this not ruled stationery) to write a roundelay to Bills:

Bills in the morning,
Bills in the evening,
Bills in the afternoon,
Same old tune—
Please pay soon, etc.

I am surprised beyond measure at your very sordid attitude regarding the little Alice-blue slip with which you so kindly favored me this week. Not at your sending the bill—ah no! I would not have it otherwise—but at your memoranda concerning such things as rent, (vulgar custom—rent), groceries (consider the lilies, they toil not, neither do they spin). Remember, you are an artist. Go to George Bernard Shaw and read "Man and Superman" and what he—a great artist—says of the artist. (For fear you won't go, I'll give it to you)—and then be ashamed:

"An artist, if he be a true artist, will starve himself; will allow his family to starve; will permit his old mother to work to support him and will see the wife of his bosom die of want, rather than that he will desert his art or do anything but his work."

Now, you know you're not a real artist. You're a sordid, mercenary machine. Instead of an artist you ought to be manufacturing Chromo-litholeo-Margarino crayon portraits "for the trade." But if you persist in shutting your eyes to the wonderful stars and your ears to the far peaks of song—all right, your blood be on your own head, and to further increase your damnation I'll send you $7 (please pardon me for mentioning money in a letter) next Monday.

"Just for a handful of silver he left us,
Just for a ribbon to stick in his coat.
Found the one gift of which fortune bereft us.
Lost all the others, he left us devotion."

That's the way the late Mr. Browning sizes up your apostasy. Now arn't you sorry?

Yours very sorrowfully,

Cementing Glass to Glass or to Metal.—Heat guttapercha and shellac (equal parts) in a jar placed in a saucepan full of sand, which, when placed on the fire, enables the mixture to be melted.

Or mix glycerine and litharge in very fine powder to dough-like consistency. In mending dishes, moisten first with glycerine, then apply the cement, and bind together for a day or two.

Or dissolve thin shreds of gelatine to saturation in acetic acid and fill into small bottles. Stand the bottle in hot water before using. This is known in the jewellers' trade as "Diamond" or "Armenian" Cement.—*Figures, Facts, and Formulæ.*

OZOBROME.

THE NEW CARBON PRINTING PROCESS WITHOUT THE DIRECT ACTION OF LIGHT.

[THE growing popularity of this process in Great Britain and the increasing interest shown in it in this country will doubtless influence some importing house to handle supplies in this country. At present materials have to be imported direct from the Ozotype Co., Kentish Town, London, N. W. The working instructions given below are taken from their latest working manual of February, 1907.—ED. W. P. M.]

Advantages over Other Pigment Processes.

1. The worker is independent of daylight for printing.
2. No sensitizing or exposure of tissue is required.
3. The sensitive material is bromide or gaslight paper, which is well known for its keeping qualities, and can be procured anywhere.
4. Carbon enlargements can be made from enlarged bromide prints, thus saving the trouble and expense of making enlarged negatives.
5. Pigmented pictures can be made either upon the original bromide paper, or transferred to any suitable surface.
6. All results are the right way round, making double transfer a thing of the past.
7. A number of copies in carbon can be made from one bromide print without using a negative, and the original bromide print may still be retained unimpaired.
8. Any class of negative may be used for printing, as the different grades of bromide and gaslight papers, now procurable, enable the worker to get soft or vigorous effects at will.

Working Instructions.

Materials required: A bromide print, a piece of ozobrome pigment plaster, and (for method No. 2) a piece of ozobrome transfer paper.

Any bromide or gaslight papers are suitable, but *toned* bromides do not give the best results.

NOTE.—Thick and strong bromide papers with fairly smooth surface are best for the transfer process, as they have to stand a little wear and tear.

All traces of hypo must have been thoroughly removed from the bromide print.

If the bromide print has not been hardened during the fixing, the surface will require to be hardened by immersion for five minutes in a 10 per cent. solution of formalin and washed for ten minutes.

NOTE.—A 4 per cent. solution of chrome alum may be used. Immerse ten minutes, wash fifteen to twenty minutes, and dry.

Dilute the concentrated pigmenting solution (as sold) by adding four times its bulk of water—for example

Concentrated solution ..... 4 ounces,
Water ..... 16 ounces,
making a working pigmenting bath of 20 ounces.

NOTE.—One part of the concentrated solution to three parts of water should be used for bromide prints with very deep black shadows and for transparencies.

Pour the working pigmenting solution into a porcelain dish somewhat larger than the bromide print, and place another dish half full of cold water alongside of it.

Place the bromide print face upward in the dish of water.

Take the plaster and slide it gently *face upward* under the surface of the pigmenting bath; rock the dish to ensure the plaster being evenly covered, and at the same time remove any airbells.

NOTE.—A large camel or Siberian hair mop brush will be found very useful in keeping the plaster under the surface of the solution and brushing away airbells.

Leave the plaster in the bath until it straightens out and becomes limp. This will take about one minute in summer and two minutes in winter.

There are two methods of bringing the plaster and print into contact and it is important to bear in mind that any excess of pigmenting solution beyond that which has been absorbed by the gelatin film of the plaster might injure the delicate tones of the resulting picture. It is, therefore, necessary to remove or disperse any superfluous solution remaining on the surface of the plaster before it is brought into contact with the print. This is accomplished by drawing the soaked plaster once or twice along the surface of clean cold water.

Squeegeeing for Small Work.

Lift the soaked plaster from the pigmenting bath, allowing the excess of solution to drain off. Now draw the plaster face downward across a surface of cold water (the water in which the bromide print is lying will do) and, after draining, bring it at once into contact with the print under the surface of the water, then lift the two papers, clinging together, out of the dish and squeegee them into contact upon some smooth hard surface, such as a sheet of plate glass. Any adjustment of the papers should be done immediately after removal from the water.

Squeegeeing for Large Work.

The manipulation described above may not be found convenient when working large sizes, such as 8 x 10 and upward. In this case an alternative method is recommended.

As soon as the plaster is sufficiently soaked in the pigmenting bath, take the *print* (wet and dripping) from the cold water and lay it face upward upon a sheet of plate glass. Now lift the *plaster* from the pigmenting bath (allowing it to drain from a corner), then draw it face downward across a surface of cold water (the dish from which you removed the print will do). After draining for a few seconds place it carefully upon the print and squeegee into contact.

Then, either place the adhering papers between blotting paper or hang them up until ready for development.

NOTE.—The water must be changed after each print has been manipulated.

To lift the adhering papers from the slab after squeegeeing, insert the blade of a knife between the underlying paper and the glass, as any accidental separation of the papers would cause specks and other troubles.

The following times should be allowed for the squeegeed papers to be left in contact, in order that the necessary chemical action should take place:

When the solution is diluted 1 part to 4 parts water, twenty to thirty minutes; when the solution is diluted 1 part to 3 parts water, fifteen to twenty minutes.

NOTE.—These times may be exceeded if more convenient, but the combined papers should not be allowed to dry, as stripping and development would be very difficult. Lightly printed bromides take less than the above times.

At the expiration of the specified time, either of the two following methods may be adopted to produce pigmented pictures:

METHOD I. THE NON-TRANSFER PROCESS.

In this process the bromide print itself is made to form the support of the picture, and this method is recommended for artistic work on the various grades of rough bromide paper on the market. The prints by this method may be more easily worked upon with a brush than those by Method II.

Manipulation for Method I.

Immerse the adhering papers in hot water at about 105° to 107° F. Feel at the corners whether the papers are likely to separate easily. If so, remove the paper backing of the pigment plaster with a steady, unbroken pull, leaving the print in the water and throwing away the plaster backing.

Allow the print to remain face downward in the warm water until most of the soluble gelatin has dissolved, then a gentle dashing of the warm water over the print with the hand should complete the development.

NOTE.—Time is better than mechanical manipulation.

Ozobrome pictures should develop easily if left in the warm water for three to five minutes, but the progress of the development must be watched.

Commence development at 105° F. and then, if necessary, heat the water.

When the development is complete, rinse the picture in cold water and hang up to dry.

NOTE.—In this method the halogenized silver image remains under the gelatin image. This silver image is sensitive to strong daylight; it is therefore advisable to remove it, which can be effected by the well-known Farmer reducer.

METHOD II. THE TRANSFER PROCESS.

In this process the image, impressed upon the plaster by contact with the bromide print, is transferred to another support, leaving the original bromide print available for further transfers, *cold* water being used instead of hot in separating the plaster from the print.

Manipulation for Method II.

Place a piece of transfer paper face upward in a dish of clean cold water.

Immerse the adhering papers in the same dish, and after a few seconds' soaking the papers can be easily separated by a steady pull from a corner.

NOTE.—In this case the pigmented gelatin of the plaster will adhere to its own support, leaving the bromide print uncovered and changed from black to a light brown color. The plaster now represents the exposed tissue in ordinary carbon printing, with the immense advantage that the image is reversed as regards right and left, thus securing an unreversed picture by single transfer.

Place the bromide print in a dish of cold water preparatory to redevelopment and keep the plaster in your hand while you are examining the transfer paper for airbells, which are most likely to accumulate after the operation of stripping. Now bring the surfaces of the plaster and transfer paper together under the water—lift them out, clinging together, and lay them upon some hard smooth surface, such as a sheet of plate glass, and squeegee them into contact exactly as in carbon printing.

Place between blotting paper under moderate pressure.

NOTE.—A sheet of thick plate glass makes the best weight.

At the expiration of about fifteen to twenty minutes development should be proceeded with. Place the combined papers in water at about 105° F., watch the edges of the plaster, and as soon as the soft pigment begins to ooze out it is time to strip off the plaster backing by taking hold of a corner and separating

it from the picture by a steady unbroken pull. Throw away the plaster backing and leave the print face downward in the warm water to develop itself, turning it over now and again to see how it is progressing. Should the picture develop too slowly, use hotter water and move the picture backward and forward along the surface of the warm water. Rinse in cold water after developing.

NOTE.—Development should be continued until the picture presents a little more contrast than is ultimately required, as when dry the effect is softer than when wet.

To Redevelop Bromide Prints that have been Used for the Transfer Process.

After separation from the pigment plaster in Method II the reader has been advised to place the bleached bromide print in a dish of water preparatory to redevelopment. Wash the prints in this dish for fifteen or twenty minutes in running water, when they will be ready for redevelopment.

Place the washed prints in another dish containing any hydroquinone-metol, amidol, or similar bromide developer and wait until the image changes through dark brown to deep black, then wash again for fifteen to twenty minutes in running water.

NOTE.—The bromide developer should be of full strength and preferably without any bromide. The prints must be fully redeveloped and it is wise to leave them in the developer several minutes after they have assumed a deep black color. It is impossible to over-develop. The redevelopment may be carried out in daylight and no fixing is required.

The bromide print is now restored to its original condition and efficiency, and can be used again for transfer printing. In fact, with care, as many ozobrome pictures can be made from one bromide print as the strength and substance of the original bromide paper will allow. It is advisable to dry the bromide print before using it again.

Modifying the Picture.

In Method I the bleached image beneath the carbon picture may be redeveloped partially or entirely, and this may be made use of in various ways. For instance, a weak bromide may be converted into a strong print by reblackening the underneath image, and many beautiful effects may be secured by causing the redeveloped silver to modify the tone of the semi-transparent carbon picture.

If a weak developer be applied with a brush local intensification may be effected, and a sky which is hardly strong enough for the rest of the picture may be made heavier in this way.

The underlying image may be also toned by the various bromide toning solutions.

Of course, the developing or toning solutions must be removed by washing for about fifteen minutes.

The redeveloped silver image, being protected from the atmosphere by a layer of hardened gelatin, is naturally much more permanent than an ordinary bromide print.

Possible Difficulties.

Loss of Detail in High-lights, Patchiness in Skies, and Dark Marks.—If the soaked plaster is taken from the pigmenting bath and brought immediately into contact with the bromide print, the excess of solution of the surface of the pigment plaster will most probably act upon the image before the film of the pigment plaster can be brought into close contact. This gives rise to patchiness, dark marks, and loss of delicate detail. Always remove the superfluous pigmenting solution by drawing the gelatin surface of the pigment plaster over clean water before bringing it into contact with the bromide print.

Another possible cause of general softness of the gelatin film and consequent washing away of high-lights may be that the working pigmenting solution has become contaminated with gelatin dissolved out of the plaster. In this case the addition of alum is necessary, thus: Add 15 to 20 minims of a 5 per cent. solution of ordinary alum to each ounce of concentrated pigmenting solution contained in the working bath. An excess of alum gives flat pictures.

N. B.—It is strongly recommended to add the above quantity of alum to a pigmenting bath that has been used for about eight whole-plate pictures, or their equivalent in surface.

Pictures Flat and Difficult to Develop.—This trouble may arise from hypo remaining in the bromide print. One remedy is to soften the gelatin so that the development may be easier. This can be effected by adding acetic acid to the working pigmenting bath in the proportion of 2 to 3 drops of glacial acetic acid to each ounce of concentrated solution contained in the working bath. A difficulty in development may be caused by keeping the plaster too long in contact with the print or transfer paper.

Frilling.—The edges of the plaster frill up during development. This may be caused by using a plaster smaller than the bromide picture. See that the plaster completely covers the picture with a margin to spare. No safe edge is required when the above precaution is taken. All the Ozotype Company's Pigment Plasters are cut to allow such a margin.

Frilling may also be occasioned by the plaster being saturated with water when transferring, in which case it fails to adhere firmly to the transfer paper. With very rough papers, lack of pressure after transferring or allowing insufficient time between transferring and developing may give rise to the same trouble.

If the plaster backing is stripped before the gelatin commences to dissolve at the edges, frilling at the corner may be experienced.

Specks and Airbells.—In all stages of the process look out for airbells and remove them. Bear in mind that all surfaces should be brought together either under water or with a layer of water between them, and that the water itself should be free from airbells. The critical moment to look for airbells is after stripping the plaster from the bromide print. The transfer paper lying in the same dish is very likely to catch a crop of small airbells, which, of course, must be removed before bringing the papers into contact. It is a good plan to strip the plaster in a separate dish of cold water.

ART PRINCIPLES IN PORTRAIT PHOTOGRAPHY.

[PROFESSOR BECK's great work on *Art Principles in Portrait Photography* will certainly be one of the most widely read books on photography within the next few months. The book will be reviewed at length in our next issue; meanwhile we are allowed to print the preface and a few extracts from the first chapter, which give a good idea of the scope of the book.—ED. W. P. M.]

The author believes that art in America cannot make its way to the people without a medium that will educate. Illustration has done its part. It is a popular art and a popular language, and its influence continues.

Painting cannot become a vital feature in our country for a long time, owing to the absence of tradition and the comparatively slight opportunity afforded

the majority for seeing the work of strong painters. Nor could the product of the talented few be other than limited in its influence even though it were to become far more accessible, for we must not lose sight of the truth that merely seeing or possessing pictures does not disclose the secret of their construction or necessarily impart to us wholesome impulses and deeper insight. Our limitations continue until we try to produce a creative work, and in the effort we gradually learn the pictorial language.

What is needed is an art so simple, and in its first stages so nearly a mechanical operation, that all may practise it.

Photography has touched the life of every one. It has supplanted to a large extent the use of the pencil and the brush, as it overcomes the average person's inability to draw with accuracy the objects before him. The exact and forceful lens of the camera renders nature sufficiently well to hold the interest and gratify the scientific wish for a clear reproduction. To this extent photography is a convenience, but as yet it is a tool almost uninfluenced by the mind of the operator. The processes inherited from Daguerre remain practically unchanged today. Their results are known popularly as "good straight photography," and as now practised they are singularly unsuited to artistic work and wholly impossible for the expression of pictorial thought.

Enslaved by commercialism, this plain photography has run into a lifeless groove. It has established a realism tending to preclude that nourishment and refreshing mental influence found in suggestion and in the creative powers resulting in beauty. Its direct result has been to instil in the public a taste for literalism chilling in its effect upon every form of art.

Art in photography is possible only in an extension of the methods known and in the employment of new processes to effect a manipulation of the photo-image. When the tool is made so pliable that it records more than the surface appearance of things, when the personal element enters to give life to the accurate records, the present limitations of impersonal representation are removed from photography, and its large, true sphere of influence opens. Not the subject merely, but the quality attained in the treatment of the subject, will become our chief source of delight.

Several methods are used at the present time to modify the lens record. In some instances the printing paper is worked upon in such a manner as to leave undeveloped the less desirable definitions of form contained in the negative. A certain resemblance to creative work results, and much beauty has often been attained, but "picture unity" and "picture expression" have rarely been reached. Certain other factors are required to produce them. If creative work is to enter into photography, it must be possible to make on the negative a line of any character and to control the light and shade with the facility of one who paints.

The illustrations of this book show that those powerful resources of the graphic arts, light lines and dark lines, lines having sharpness and lines having soft margins, can be made on the negative as readily as on paper or canvas. The new processes involved are especially rich in the control of the light and shade effects. Thus fitted out, photography becomes a medium to be taken seriously in art educational work.

Suddenly a great change is wrought in the very aim of the profession. Whereas by plain photography the operator's attention was directed to the head and figure of the person portrayed and the background was a haphazard and illogical factor, the new photography aims to establish the right relation of the background to the figure, in order that

the likeness may be raised into portraiture through a completeness of pictorial expression.

The photographer's sole reliance upon "lighting" accounts for the peculiar and fatal limitations of plain photography. Lighting exists to give roundness to the forms of head and body. In painting we speak of it as "modelling." It is not an element of construction as arrangement is, it only makes more effective the well-placed parts; but before it is considered other points must be thoroughly understood. The art-aspirant in photography is destined to meet the same difficulties that would confront him in painting. When he holds in his hand a negative, he will be puzzled to know what to do with the background or how to modify the figure. A few principles will help him to think pictorially—for art is not structureless—and he will arrive at an understanding of what constitutes the difference between nature and art, how beauty is to be secured, and what factors combine to regulate expression. He can then indulge his love for invention by manipulating the photographic plate and creating beauty through the study and practice of composition.

In the following treatise the author offers an explanation of the principles and processes that will remove photography from its limited conventionalities and place it among the free arts. Released from its bonds of custom, it may advance continually into new realms and become to the people an "art" in its true and vital sense. We shall then have attained that wholesome condition where there will be intelligent intercourse upon all art matters.

This preface would not be complete without an expression of gratitude to Mr. J. M. Appleton for his most valuable assistance in the development of the processes and for his kindness in granting me the use of his New York studio where the photo-plates contained in this book were made.

I also take pleasure in publicly acknowledging the encouragement afforded me by the endorsement of my manuscript by the Photographers' Association of America at its annual convention at Buffalo, and by a similar endorsement on the part of the Associations of New England and Ohio and Michigan.

. . . Photography enters the field of art guided by the pictorial principle. Photo-portraiture should strive to attain the depths, the tactile quality, the logic, and the completeness of balance that delight us in masterpieces of drawing or painting in monochrome. Compared with the free art of painting, photography will always have limitations, one of which is to be found in the temperamental differences of the workers in each profession. . . .

. . . Composition in photography is the easiest study found in any art, because it does not require several years to gain a power over the medium and because colors are eliminated. When the chemical and technical sides are under control, experiments are made with rapidity and results are gained in hours that in any other art require days, weeks, or months; experiences crowd and insight is rapid. . . .

. . . "What is the difference between a good photograph and an artistic photograph? It is commonly understood that a good photograph is merely a print from a good negative, whilst an artistic photograph must have been carefully selected as to subject, composition, and lighting."

In reality there is no difference between a good and an artistic photograph. Artistic in itself embodies "good;" artistic as a quality is above the question of means or method, it deals only with result. . . .

. . . The great basic principles and truths remain ever the same, although

each new generation demands a mode of expression consistent with its cravings, thoughts, strivings. Art must keep abreast of its time, and must not only reflect our age for the future, but must at this time project itself into the future with helpful resourcefulness. We have a wide horizon, the arts of many centuries are open to our gaze, and we feel increasingly their influence. Growth continues; we must all aid in promoting, not retarding, the advance. . . .

COLORED PHOTOGRAPHY.

[THE following interesting account of the progress of colored photography, from the pen of the late Léon Vidal, is one of the many articles of special interest to the professional photographer to be found in *The Graphic Arts and Crafts Year-Book*, from the press of the Republican Publishing Co., Hamilton, Ohio.—ED. W. P. M.]

Nothing is more fascinating than the study of photography as it especially applies to the reproduction of colors.

The progress certainly being accomplished in this path, and the various processes in course of experimentation, lead us to hope for new steps toward a final success. With this promise, how can we separate ourselves from this question so worthy of interest?

When we think of the service which such a practical process as reproduction of colors would give, or of the pleasure that artists and all the amateurs in the photographic arts would receive from it, we cannot but consider the complete solution of this problem as being one which is imposing itself most imperiously on the minds of those making research along these lines.

These do not appear in legions, but the quality is not lacking, and we note with pleasure that in the principal countries where science is honored men of talent are giving much attention to this study, and from what we now learn of it efforts have already been crowned with success, and probably one of the most curious methods which has been given us to examine will soon enter into the everyday practice of this work.

But we will return to this subject, after having given a cursory glance at the various processes which are now applicable, although giving place to certain complications which will certainly be avoided in the near future.

The manner of reproduction actually employed the most frequently is the one which is based on the selection of colors by the aid of color screens or by the filtration of light.

This process is accomplished by the making of three distinct negatives, each of which may be drawn of the color complementary of the one to which it corresponds or superposes. By various means the three impressions, successive and distinct, conduct to a synthesis more or less satisfying, according as the selection has been more or less correct, which depends not only on the nature of the color screens, but also on the duration of the pose and its development. To these three essential principles it is well to add another: the accuracy, more or less, of the positive colors destined to form the synthesis. This summary of indications suffices to show the complications of a method called *indirect*, and with good reasons.

It is then urgent to make research in a path more direct, in order that the amateurs may not have to recoil before such an array of difficulties.

Already the construction of an apparatus permitting the simultaneous obten-

tion of three trichromatic negatives constitutes a simplification of the method, but there still remains the difficulty of harmonizing the other principal factors, and there indeed exists the cause for hesitation which is experienced in the industries as well as among the artists.

It is necessary then to tend toward the simplification which is obtruding itself, may it be, toward the direct obtention of an image in colors, in a single pose and on a single plate. May we not say that the solution furnished by the Messrs. Lumière is in a measure the realization of this desideratum?

Evidently by the genial process of interferential photography we may attain this charming result, though this process may be far from always leading to good proofs. It presents such difficulties, or rather we would say such delicacy of manipulation, that its employment would not be recommended to the general public however interested it may be.

There is now among the various direct processes with which we are acquainted one whose remarkable results has not only surprised but charmed us as well.

I speak of the process of Messrs. August and Louis Lumière. When it was first given to the public it was much discussed, and indeed it was difficult to believe that by this method could be attained a solution really so practical. Since, however, thanks to the kindness of those learned inventors, we have been able to see remarkable specimens of their method in which we firmly believe.

Let us remember in the first place the necessary principles, as known by persons informed on the question of photography. The ideas of the Messrs. Lumière bear a strong analogy to the principles of the method of Mr. Joly, of Edinburgh, and Mr. T. Sampols Brasseur, of the United States. Using with advantage the polychromatic lined network of these two inventors, they have been able to render results almost microscopic, if one may say so, by introducing into the smallest spaces hundreds of transparent colored particles corresponding to the three colors: orange-red, green, and violet.

The vehicle which these gentlemen have chosen is the fecula, or starch obtained from grinding and washing potatoes. The granules of this tuber in their natural state are very transparent; as they are very susceptible to coloring material, one can easily give to them the necessary color.

A sorting of this obtained fecula is operated in such a manner as to exclude the grains which are either too large or too small. Those which remain are placed in equal quantities in the same receptacle, where they are shaken in such a manner as to form a mixture as complete as possible; this done, the tricolored powder is spread on the glass plates in a powdery coating.

The colored particles ought to adhere to this—and the sprinkling is continued until the greatest possible number of grains have been made to adhere. In spite of this continued operation there may still remain some interstices free from grains; then it is necessary to strew them again, for if not entirely filled they will permit the passage of a white light. Success in this may be finally attained by means of the use of a black powder, the grains of which are still smaller than those of the fecula.

After this last strewing, the result is a surface formed entirely of translucid color-points standing out on a background absolutely opaque. Viewed by the aid of a microscope it appears like unto a field of jewels.

When the polychromatic coating is finished, it is necessary to recover it with a sensitive emulsion; that is to say, it must be rendered absolutely impermeable to water. We suppose that this result must be accomplished by the aid of a varnish of celluloid. This, however,

becomes the business of the manufacturer. This impermeable condition once obtained, it is then only necessary to recover the whole with the sensitive emulsion. In regard to this, it is proper to suppose that this emulsion is of a special quality, as it is essential that it be of such a nature that its granules will not be at enmity with those of the fecula.

Now that we have a plate so well prepared how shall we make use of it?

It is placed in the customary frame with the sole precaution of presenting the back of the plate to the object-glass, and not the side which is coated.

The reflected image then ought to pass through the glass. It meets then the multiplex-screen formed by the colored granules, and according as the radiations are green, red, blue, or white, they pass through certain points in preference to others.

Briefly, a selection local and infinitesimal is effected, but of such a nature that each point colored with a certain tint only corresponds to an action determined by the nature of this coloration.

While the green radiations absorbed by the red points do not pass through them, they pass through the green points and so on. This phenomenon of absorption to be accomplished is produced through spaces so small that they cannot be conceived.

Therefore, after this development, a negative is obtained with an opacity more or less intense, recovers the surfaces which ought to be the very clearest possible.

It is then necessary to restore the direction of gradation, by inversing the image, an operation which is effected without any difficulty, and which must follow immediately the obtention of the negative.

In all the difficulties that attend the preparation of the plates of the multiplex screen it is only the manufacturer who is chiefly concerned.

As to a reproduction, it is very simple. It is operated as with the plates prepared with the emulsion in the customary way, with the sole difference that they must be placed in the frame with the back to the front, and then reversing the image after the development.

The role of practitioner or amateur will be truly simplified when such plates will be found in commerce at the disposition of every one, and we believe this is soon to be realized.

The Messrs. Lumière are occupied at this time, so we are informed, in having spacious shops constructed for the preparation of these plates, and we are sure they will not cease their efforts until they produce a perfect medium.

Like St. Thomas, we wished to touch before believing; we have seen and touched and admired. The proofs shown us were of three sorts, in size 13 x 18; visible by transmitted light; images stereoscopic and projected proofs. In all three instances the result was truly admirable.

The subjects reproduced were views all taken from Nature, consisting of landscapes, marine views, interiors, portraits, etc. We were absolutely surprised at the richness of the coloring and its exactitude and harmony.

To give an example: One of the landscapes represents a view taken on the shores of the Mediterranean. In the foreground there is a beautiful pine tree with foliage of a charming green standing against the azure of the sky. A field of olive trees, with their gray leaves, is seen at the side. It is all of such startling truthfulness to Nature that we could not conceive of its being more perfectly done. This little picture is as complete as one could possibly desire. It is a delicious miniature.

Surely a painter having this document with him would have no reason to return to Nature for his inspiration, since he would have it all in this view.

As to stereoscopic proofs, they add to all the other exactitudes the reality of relief; and the granulations, whose bad effect may have been feared in the first place, disturb in no way the observation. It is as if tints, instead of being punctuated, were of a continuous coloration.

There were among them other curious views. One was of the interior of a veranda done in gold relief. The gold was put on in a wonderful manner, with all the exactness of radiation. As to the projections, they were certainly the most beautiful of their kind that we have ever seen. The considerable enlargement of these views spoiled in no way the purity of the design—the projected views were about 80 x 100.

Provided that one stands two or three meters from the multiplex screen, which is entirely disunited, one only sees the continuity of tints and the models, without being in the least troubled by the granulations which have become invisible.

It is only by approaching the projections that the points are perceived. Besides it is the same when the projected proofs are woven in black or polychromatic tints. At a normal distance the network disappears completely. It is necessary to be very near the projection to be able to perceive it.

Such is the latest word, or we will say the latest cry, of the question of colors in photography. Until now we have been reduced to a single proof of it.

The intervention of the dark-room is indispensable to the obtaining of all these new proofs. These images can be multiplied by impressions analogous to the ones which permit of infinite reproductions of images either monochromatic or polychromatic.

However, it is already much to have attained this same result with these conditions, and visible only by transmitted light—or projections.

So, one should esteem himself fortunate to be able to begin by such a remarkable debut. All this predicts that one will not have to live much longer struggling to make impressions by contact. We are certain that as soon as the Messrs. Lumière shall have launched their plates of multiplex screens—of the success of which there is no doubt—they will turn their attention to the completing of their fine invention, in seeking for the means of arriving at the multiplication by contact of the first proofs in color which have been directly realized. They have, as regarding this, data quite vague, but sufficient, however, to give the promise that the idea will be possible. For example, the research of Doctor Newhauss, and others also, has proven that one can proceed by way of discoloration in using a polychromatic prototype.

In a direct proof obtained by their process with fecula, one would place a leaf of paper recovered with three coatings of colored matter; one red, the other yellow, and the other blue; susceptible to being discolored by the light; the whole being exposed to the light would render the desired effect in consequence of absorption through the color screens, some colors not passing and they in consequence must remain without action.

It would be necessary to subsequently proceed by using a fixer to give the colors still subsisting the faculty to resist a new continued action of light—and all will then be finished.

This is only a suggestion of the process, and there are no doubt others to follow; but let us await the future with confidence and patience, so much the more so that we will have to aid us the hope of a progress grander still, a reality of the most attractive nature, which now constitutes this most satisfying solution.

That is where we now find ourselves—or, it might be nearer the truth to say, where we will soon find ourselves. We must not sell the bear's hide before it is

killed; and although we have been able to see the magnificent proofs of the Messrs. Lumière, it is prudent and practical to await the complete expansion of their method before proclaiming it an entire success. We have the firm hope that it will not be long until we shall have in circulation the plates with multiplex screens.

It has appeared preferable to us to entertain our readers with the future condition of this question rather than to go back to the divers varieties of indirect trichrometry so well known, and besides having made and making each day their proofs, doomed to disappear as soon as appears in the photographic market the rapid plates destined to furnish in a single pose the image in color of any polychromatic subject.

This will no longer be the direct image, such as is obtained by interferential photography, but it will be a process far more practical, and in consequence will be within the reach of all.

The dream of making a painting in a moment is about to be realized through the aid of this wonderful invention—"Photography of Colors." This will surely be a worthy finish of all the varied marvels in this incomparable art, for here it finds its apogee.

METOL-HYDROKINONE AND ITS ADAPTABILITY.

BY G. E. C. MORRIS.

THERE are very few really reliable developers which can be used for every kind of work.

Pyro, for instance, is only suitable for plates. Amidol is only fit, practically speaking, for bromide work. Hydrokinone by itself is suitable for neither. Rodinal does not adapt itself to every condition likely to be met with in the development of plates or papers, though under certain circumstances, such as stand development, it is *par excellence.* Eikonogen by itself is not much use, neither is metol. But most people will agree that a combination of metol and hydrokinone is a developer which can be used under any circumstances and produce excellent results, with both plates and papers. In other words, it is adaptable to every phase of development.

There are so many different formula that it would be superfluous to give any particular one here. Most makers publish an M.Q. formula nowadays with their plates as well as their papers.

Metol-hydrokinone can be made up as a single-solution developer if preferred, but unless used within a short time is liable to discolor badly and become very slow in action, although for certain subjects this action is advantageous; but more of this later.

In the mean time let us deal with the double solution. When employed for developing plates its action is on the whole rather quick. The image appears within ten seconds of the solution being poured on the plate when there has been normal exposure. Then its behavior is a trifle peculiar: all details appear to flash up at once with a bright, sparkling effect; but as density is gained the bright look fades away, leaving an impenetrable black mass when examined by looking through the negative, and herein lies the danger of under-development. Unless the image can be seen fairly distinct on the back of the plate, there will not be sufficient contrast, and a weak, flat negative will be the outcome. If the workers who complain of being unable to get

density with this developer will bear this in mind their troubles will cease.

The above remarks apply to the normal undiluted solution. Personally, I prefer to go a step farther, however, and use the solution at half strength, giving of course double the time for it to act. For example: supposing a negative takes six minutes to fully develop with the normal solution, it will take twelve minutes with a solution half strength to reach proper density. It has also this further advantage: it produces a brighter negative with more detail, especially marked in the shadows.

My experience with most developers has taught me that hurried development with a very strong solution means excessive contrast—lack of atmosphere and blocked-up shadows, and yet how many are there who will take the trouble to spend the necessary time in getting the only proper result? Considerable difference in exposure is not vitally important if development is carried out slowly with a dilute solution, and excellent results under the various conditions of exposure are bound to ensue.

A little bromide is generally advisable in cases where over-exposure is known, but otherwise, except in extremely hot weather, it is as well to do without it, for with some plates it has a tendency to block up the shadows, although it may prevent actual chemical fog.

With regard to the discoloration of the single-solution developer, this cannot be avoided if it is kept for some time. I have found, however, that it gives a yellowish tone to the film under prolonged development, and this (in case of under-exposed plates the detail of which has been forced out, though not sufficiently strong to print properly) is a decided advantage.

Now we come to its behavior when used for paper.

Many, I know, prefer amidol for bromide work, and a very exellent developer it is, but its chief drawbacks are, first, that it will not keep in solution, and secondly, it is not easily controlled. The image develops quickly and stops at a certain degree of intensity, according to the length of exposure it has received. If slightly under-exposed no amount of forcing will have the slightest effect, and *vice versa* under the opposite condition; though it can, to a certain extent, be controlled with bromide at the expense of the color of the image, which, in my opinion, puts the whole thing out of court.

Metol-hydrokinone, on the other hand, is capable of adjustment, in that it is not nearly so quick in action as amidol; and if the paper has received rather too generous an exposure, it can be saved if the solution is not too strong in alkali. At the same time, there is not the same amount of control with papers as is the case with plates, but, generally speaking, an utter failure can be avoided if a little care is exercised.

Personally, I never put the whole of the alkali into the solution if uncertain of the exposure; and should the image fail to appear in a few seconds, I add a little more, and so on.

The conditions of the development with papers differ from those with plates. Prolonged development with the former, even in a weak, well-restrained solution, is apt to produce stains; therefore, when a nicely balanced developer has been obtained, it is best to adjust the exposures to suit it, without the aid of bromide. It is quite easy to do this when once a negative has been tried.

The M.Q. developer for paper should be kept in two solutions if possible; a little extra preservative can be added to No. 1 to prevent discoloration. This in time is bound to occur, but for all practical purposes it will keep long enough. The same formula that is used for plates is equally suitable for paper, provided it is not too restrained. A few tests will show what is needed.

Neither should it contain caustic potash: however good this may be for plates it is not suitable for papers, but any formula which contains a carbonate of soda accelerator is to be preferred.

A few words on the compounding of the M.Q. developer may not be out of the way.

The cheapest plan, undoubtedly, is to buy the ingredients separately and keep stock solutions of each; but if space is a consideration and it is more convenient to purchase the packet form, powders, or tabloids, it is most important to remember, when making up an actual developing solution, to dissolve the metol-hydrokinone first, before adding the alkali, and, moreover, to see that it is completely dissolved before the latter is added.—*Photographic Monthly.*

NEWS OF THE CONVENTIONS.

Canadian Photographers' Association.—At a general meeting of this Association held in Montreal, April 4, Mr. J. N. Laprès, of that city, was elected President. Mr. E. Poole, of St. Catherines, Ont., Secretary. The Convention originally set for May 29 and 30 has been postponed to some time in August. Further details will be given later.

Nebraska Photographers' Convention, Lincoln, May 22, 23, and 24.—Felix Raymer, of Effingham, and Frank W. Medlar, Secretary of the National Association, are preparing interesting talks for this convention. The above-named gentlemen will also act as judges.

The program is interesting throughout. Between sessions the time will be made pleasant by field sports, ladies' auto rides, entertainments, and on Thursday evening a grand banquet. A cordial invitation is extended.—ALFRED T. ANDERSON, Secretary.

Ohio-Michigan Photographers' Association.—In view of the fact that "The National" will be held at Dayton, Ohio, this Association has decided to postpone its 1907 meeting until 1908. This will give the members of the O. M. P. A. an opportunity to attend a national convention in full force. In the mean time the officers of the O. M. P. A. will be planning to give its members, at its 1908 Convention, a decidedly educational meeting, feeling as they do that heretofore at conventions too much has been said and done on the art side of photography, and by far too little on the money and business-getting side. The officers have decided to work strongly along these lines.

Tristate Association.—We are asked to state that this Association, which held their Convention at Columbus, Miss., April 9 and 10, were so favorably impressed by the splendid work done by Mr. W. S. Lively, of the Southern School of Photography, in conducting the instruction classes at the Convention, that it suggested that the Southern School of Photography devote the month of June to a professional or postgraduate course. The school has set apart the month of June for this purpose, and already most of the photographers who attended the Tristate Convention have enrolled. A very special rate of $15 for any two weeks in June or $25 for the whole month. This includes the laboratory fees. This school, under the management of Mr. W. S. Lively, is one of the most efficient in the country, and Mr. Lively's success as a teacher has been endorsed by many of the photographic associations. The college at McMinn-

ville, Tenn., is located in the midst of some beautiful country, and photographers in search of a vacation in which business can be combined with pleasure would do well to take advantage of this special course.

Illinois Photographers' Association, Chicago, Ill.; May 7, 8, 9; Secretary, W. C. Graber, Chicago, Ill.

Nebraska Photographers' Association, Lincoln, Neb.; May 22, 23, 24; Secretary, Alfred T. Anderson, Kearney, Neb.

Photographers' Association of Missouri, Excelsior Springs; June 18, 19, 20; Secretary, E. A. Zoff, Washington, Mo.

Indiana Association of Photographers, Winona Lake, Ind.; July 8–12; Secretary, J. Frank Cady, Booneville, Ind.

Photographers' Association of America, Dayton, Ohio; August 6, 7, 8, 9; Secretary, Frank Medlar, Spencer, Ia.

The New England Decennial Convention, Boston, Mass.; August 27, 28, 29; Secretary, Geo. H. Hastings, Haverhill, Mass.

TRADE NOTES.

THE Anthony and Scovill Co. announce the opening of a new branch office at 407 North Broadway, St. Louis, Mo. This step was made necessary by the fast increasing business in the middle West. Users of Ansco cameras, films, and Cyko paper will appreciate these increased facilities and saving of time effected by not having to fill orders from the New York headquarters.

We also note that the firm have largely increased their floorspace by taking the entire second floor of the building, at No. 40 E. 21st Street, New York, some hundred yards east of the Flatiron Building. They will carry in stock for delivery a full line of their well-known specialties.

CONSIDERABLE prominence has lately been given to a hypo test for the permanence of platinum prints. This test seems to us to be something like calling the man who was drowned in mid-ocean a poor swimmer because he did not save himself by swimming ashore. Curtis and Cameron, manufacturers of the Harcourt platinum papers, issue a statement—to be found on the following leaf, showing the results of a test of platinum papers which was made by an expert at the Massachusetts College of Technology. It will confirm the good opinion of the paper held by all who are using Harcourt Platinum and should induce those who are not to give it a trial.

THE Mirmont Photo Paper Co., of Glendale, Brooklyn, N. Y., are manufacturing, in their model factory, a line of photographic papers, under the name of the New York Photo Papers, which is becoming very popular. We recently had an opportunity of making a series of prints from our last summer's negatives on these different papers and were much pleased with the results. The developing paper, which comes in six grades and two speeds, gave splendid results with a stock developer we had previously used for another brand of paper. The platinum paper, both black and white and sepia, the latter developed in a cold bath, is claimed to be richer in platinum than any other on the market. The prints we obtained —rich blacks, clear whites, and rich warm sepias— were remarkably free from the muddy brown tones sometimes found in platinum papers. Of the New York Bromide and Gelatine Print-Out Papers we will speak later, not having had time to make all the prints we wished to.

AT the recent "Single-Print" exhibition of the New York Photographers one of the prints that received much attention and favorable comment was a splendid enlargement of a photograph of David Warfield made by Clark and Freed, of New York, who make a specialty of high-class enlarging to the trade. Photographers who desire good enlarging would do well to communicate with this firm.

BURKE & JAMES, of Chicago, ask us to state that they have purchased the camera factory of K. Nelson, who was the largest manufacturer of cameras in Chicago. They have also taken over the sole selling agency and are manufacturing the Wager Exposure scales and Definition scales.

BURKE & JAMES, of Chicago, have just issued a booklet on *Daylight Automatic Development of Negatives with the Ingento Tank* that gives much useful information and many formulas for the man who adopts the tank method of development. Mr. Claudy's article on this method of developing, printed elsewhere in this issue, demonstrates many of the advantages of the tank over the tray, and the booklet gives the practical application of the system. Copies can be had gratis from any dealer or direct from Burke & James.

THE Chicago Photo Scenic Co., who make their first appearance in our advertising pages, are issuing from their Riverside Studio a very fine line of backgrounds. Their list, which will be mailed free to photographers, contains an unusual number of original and handsome designs. For a copy address the company at 140 Dearborn St., Chicago, Ills.

FROM W. P. Buchanan, of Philadelphia, we have just received a little brochure on "quality" backgrounds, a line of grounds that have the good quality of being unobtrusive, medium priced, up-to-day, practical, and in keeping with present-day photography. Photographers should write in for a copy of *Sit Up, Look, and Listen*, showing illustrations of these backgrounds.

EDITOR'S TABLE.

THE annual meeting of the Board of Governors of the American Federation of Photographic Societies was held in the rooms of the Pittsburgh Press Club, on March 20, 1907.

A change in policy was the abolishment of the prize system which existed in the purchase of pictures chosen by the jury. Hereafter the Federation will purchase no pictures and offer no prizes of any kind.

The report of Treasurer Phillips showed the Federation to be in good financial condition with all bills paid and $380.05 in the treasury.

Mr. W. E. Strayer, of Wilkinsburg, was appointed Secretary to fill the unexpired term of Paul H. Reilly, resigned.

The following preliminary jury for the Fourth Salon was elected: Wm. H. Zerbe, Wm. T. Knox, Frank G. Wood, Dwight A. Davis, Wm. H. Phillips, John Chislett, H. W. Minns, W. S. Cline, R. E. Weeks, D. H. Brookins, R. L. Wadhams, R. L. Sleeth, Jr.

Preparatory work on the Fourth American Salon will be immediately taken up.

WE are asked to publish the following self-explanatory letter:

Editor, Wilson's Photographic Magazine.

DEAR SIR: You would greatly oblige me by publishing the following statement, that an article entitled "Art Terms Explained" recently published in the *American Amateur Photographer* was written by the writer of these lines and not by Mr. J. P. Chalmers, who had the audacity to put his name to it, although he is absolutely incapable of writing and compiling such matter. This statement will tell its own story without further explanation and comment.

Sincerely,
SIDNEY ALLAN.

A LENS-THIEF recently walked into the studio of Mr. J. H. Armbruster, of Mount Vernon, N. Y., and took away a J. H. Dallmeyer 3A lens; marked, London, Pat. U. S. 11th June, 1867, No. 15774. Any photographer having this lens offered him would confer a favor on the craft, and on Mr. Armbruster, by addressing the latter.

PHOTOGRAPHERS the world over will be glad to see that platinum, which bounded up in price several times last year and kept on the upward movement the first three months of this year, began two weeks ago a turn the other way, and since then has fallen $4 an ounce, going down from $38, the top mark, to $34. Refiners say that there is a likelihood of a further decline.

The manufacturers of platinum paper who have been worrying over the reports of the scarcity of the metal and the unusual high prices, are breathing easier. It was said several months ago that the Russian government, which controls the mines in the Ural Mountains, where most of the platinum is found, was restricting the output.

The platinum imported into the United States last year amounted to $3,601,021, or 75 per cent. over the valuation of the year before.

WE congratulate our old friend and subscriber, Mr. A. B. Stebbins, of Canisteo, N. Y., on capturing the Fifty Dollar Gold Prize offered at the New York Convention for the most useful suggestion. Mr. Stebbins' idea of lining a sink with cement is one of those things so simple and so obvious that we all wonder why it had not been thought of long ago. Mr. Stebbins was perhaps the most surprised man on the floor when his idea was awarded the fifty dollars in gold.

THE second annual Advertising Show at the Madison Square Garden, New York, will open on Thursday, May 16, and will be continued for seven days, closing on Thursday of the following week. Photographers in town during the show would do well to look in and see to what an extent photography can be applied to advertising. There are thousands of negatives on photographers' shelves that could be turned into money makers as illustrations for advertisements.

CHARLES SCRIBNER'S SONS, New York, have just published, in *Apollo; an Illustrated Manual of the History of Art Throughout the Ages*, a book that every photographer should secure. It contains over six hundred illustrations, reproducing most of the world's greatest art treasures. While the pictures are small they are large enough to give the photographer many valuable hints on lighting, posing, grouping, and spacing. We will be glad to send a copy to any of our readers, express prepaid, for $1.60.

ELECTRIC LIGHT FORTRAITURE

By Scott's Studios, Ltd., London, England

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV JUNE, 1907 No. 606

CONVENTIONS AND THEIR METHODS.

BY THE EDITOR.

ELSEWHERE in this issue will be found an Open Letter by Sidney Allan, with such replies as we were able to get from the men most concerned, in the short time at our disposal. Mr. MacDonald, after reading the letter, decided that as it was in the nature of a personal attack, he would refrain from replying and leave the matter in the hands of his friends. The correspondence makes interesting reading and we will be glad to hear from those of our readers who are interested in the matter.

The letter while generally on "the present way of holding conventions" is more particularly a somewhat severe arraignment of the third annual meeting of the Professional Photographers' Society of New York, recently held in that city under the presidency of Pirie MacDonald.

While we are in accord with some of Sidney Allan's ideas, we had an opportunity, which was denied him, of attending the meetings and are in a position to contravert many of his statements. Before going further we would like to say that we have heard nothing but praise for the manner in which the convention of the P. P. S. of N. Y. was managed, and the results. Talking with an old conventioner thoroughly well acquainted with every kind of State and National convention, he had no hesitation in pronouncing this convention as very much ahead of anything yet attempted and carried through by photographers.

Had the constitution of the New York Society permitted the attendance of Sidney Allan, we are inclined to think that, after some few suggestions for slight changes, he would have pronounced it the ideal convention and a model to be copied by other State associations.

Whether the P. P. S. of N. Y., or any other body, occupied three hours or three days in getting enlightenment is immaterial. The point is, Did they accomplish what they set out to do? The New York Society certainly did. The program was carefully thought out and fully advertised months ahead, and was carried through exactly as planned and without any waste of time. The pictures were hung in a single line and were all in position when the exhibition opened. Whether one print is representative of a man's work or not, is not the question.

The Society had definitely ordered only one print to be contributed by each member and that "every man's print be on a line with every other man's," thus carrying out the Society's principle of Equality.

It is true that reports from different Sections were read, and this in a brief but thorough manner made all the members conversant with what was being done in other Sections. Applications for leave to form new Sections were received and passed upon; the principal object of this particular meeting being to extend the Section idea until every photographer in the State is included.

We have no hesitation in saying that any other professional photographic body in the world would have been glad of the opportunity of offering the services of six such prominent men, as Bradley, Core, Falk, Garo, Hollinger, and Rockwood, to work under a skylight, and we are sure that ninety-nine photographers out of the hundred would jump at the chance to be present at such demonstrations. The Fifty Dollar Gold Prize demonstrations were certainly of the most practical nature. Any one of the ideas alone was worth many times the Society's annual dues, and all of them could be adopted in any studio with considerable advantage. The best proof of the practicability of this feature is that the executive officers were ordered to repeat it at the next year's meeting, which is in itself an approval of the scheme from the men whose approval really counts in the instance.

The banquet—the universal means of promoting harmony and good-fellowship—was in the highest degree successful in making the photographers of the State of New York realize as they had never realized before that members of the same profession are not necessarily the bitterest enemies, and that much more can be gained by an interchange of ideas than by selfishly holding aloof and each going his own way.

Without wishing to belittle the Washington Convention of 1905, we still think that "a bird in the hand is worth two in the bush," and a program of six items carried through is to be preferred to a splendid array of promises unfulfilled.

As to the exclusion of the manufacturers and dealers, it would seem that this particular Society should have the unquestionable right to formulate its own policy, and it is hardly a subject of interest to Mr. Allan one way or the other.

The complaint that time was taken up with the election of officers, etc., cannot be taken seriously. An organization must proceed along orderly and regular lines, and the time has not arrived when a set of officers can be produced as easily and as quickly as the conjurer produces a dozen eggs from a borrowed hat.

It is a natural tendency to run in ruts, and if State conventions must run in ruts we do not know any better rut to lead them to a healthy, prosperous, and beneficial condition than the very deep rut made by the P. P. S. of N. Y. at its third annual meeting.

The Open Letter seems to sum up to the idea that if Mr. Allan were to be hired to collect the pictures, and Mr. Allan were to be hired to judge the pictures, and Mr. Allan were to be hired to lecture on the relation between photography and art, then would the A1 convention arrive, and had Mr. MacDonald realized this and acted accordingly there would have been no occasion for this discussion.

Dead Black for Woodwork.—Shellac, 40 parts; borax, 20 parts; glycerine, 20 parts; water, 500 parts. After dissolving, add 50 parts aniline black.

AN OPEN LETTER FROM SIDNEY ALLAN.

Editor, Wilson's Photographic Magazine.

DEAR SIR: Permit me to say a few words about the present way of holding Conventions. I must confess that I do not share the optimism of the profession and fail to understand the sudden preference for so-called practical business talks (Yes, if they were practical; but alas! with the exception of Hearn's reception room debate and Milton Waide's showcase talk they are few and far between).

I remember having read the report that at one of these business sessions Rockwood told some anecdotes about how he had treated famous sitters (amusing, yes; but hardly instructive), and that MacDonald got up and told the boys what an increase of business he would derive from a showcase, if the management of the skyscraper, in which his studio is situated, would extend to him the privilege of putting one up at the entrance of the building. Now, there are only two or three photographers in the country, if any, who work under the same conditions as the "Photographer of Men." Of what use is such talk to the rest of the profession?

I believe this new method of "getting taught quick;" of excluding all art talks, and to lay all stress upon practical ideas, to be a very futile one. But what can be expected of the officers of photographic conventions who always seem to work in a sort of "imitative" unison? If a certain new feature is introduced at one of the conventions, it is sure to be imitated by all the others. In the eighties special stress was laid upon the social features of the conventions; then suddenly, in the early nineties, the art promotion idea popped up, and was about played out when I appeared upon the scene (some even say that I gave it the death thrust). Now it has changed into a big halloo for business. It emanates largely from Pirie MacDonald. He has a fair share of organizing talent and has succeeded in ushering in an era of conventions constructed strictly on business principles. *Business that cannot be learnt in a lifetime, taught in three hours.*

That was the actual time the photographers had for enlightenment of any sort at the last meeting of the Professional Photographers' Society of New York. There were only three sessions on the program. One was devoted entirely to the discussion of local sectional work, and another to the demonstration of ideas to win the Fifty Dollar prize. The afternoon meeting was taken up by the usual election of officers and unfinished business.

Of course, I must not forget to mention the much-heralded demonstrations of studio methods by Hollinger, Garo, Falk, Rockwood, and Bradley. What did they amount to? Can something that has taken a lifetime to acquire be taught in one hour? The demonstrator is apt to feel slightly embarrassed; he is not quite himself and at his best, and all his visitors can learn is a peculiar trick or a new device. The Aristo schools do that much better.

There was also an art talk by Hollinger at the Metropolitan Art Museum. It was advertised as something entirely new. It is as old as the hills. It was practised at most of the conventions that I have attended (for instance at Washington, Toledo, Milwaukee, and Des Moines).

The one-print exhibition has the one merit that all men are treated alike. But what is gained by it? It is impossi-

ble for one print to represent any man's work. One canvas might possibly represent the annual output of a painter who produces only five or six pictures a year. But a photographer does as many portraits every day. One print is really an absurdity, as it does not represent an average. Men who are known for the sterling quality of their work were represented by poor prints, and others known for ordinary work came out with flying colors. The sooner this method of exhibiting is abolished, the better.

Now, what was there so very practical about this convention? I fail to notice it. Did it really teach anybody to make more money out of his business? Did it take the employee into consideration, and did it elucidate the relationship between photographer and manufacturer, between photographer and patron? Nothing of the sort.

No, it is all wrong. *A photographic convention is supposed to be a business school as little as an art school.* Nor is it held to teach how to run it on the most economic basis.

Why do people come to conventions? First of all to have a good time. And they manage to have it by hook and crook. They come to see old friends and make new ones, and to keep posted on what the other fellows are doing. The educational part is absolutely a secondary consideration to them. And that even Pirie MacDonald cannot change.

The principal concern therefore should be to make the educational feature (the art side as well as the money getting side) as prominent as the social one. To devote to all three phases an equal share of attention.

W. J. Giffin, of Wheeling, W. Va., had the right *idea* of a convention. You may smile, but I mean what I say. His Washington convention of 1905 was considered a failure, but it was well planned, although he lacked the executive ability to carry out his plans. At his convention there were half a dozen good speakers (art talks as well as other ones). It had on its walls the best loan exhibition of prominent photographers' work that I have ever seen at any convention. And then the program of the entertainment committee. It was a most lavish one. It included a speech by Roosevelt, an automobile ride, a theatre party, a visit to the Corcoran Art Gallery, a dinner, etc. The only trouble was that less than half of the program was actually carried out. Why? Lack of funds, I suppose, and what is more to the point, lack of sympathy among the members of the association to have a really interesting convention.

Now, first of all, the secretaries of conventions, almost without exception, commit the error of neglecting to inform the members what is going to happen at the next convention. The members who come, come as a matter of course. They think it is the old regulation thing. This MacDonald changed. He is a good advertiser for himself as well as anything he takes in hand. All credit to him for that.

A further trouble is that conventions are always run in a certain stereotype manner. In three years there will be as little interest in business conventions as now in art educational conventions.

Why not make conventions interesting? Why not combine everything that has proved successful? Are there really not enough funds to have three or four good speakers who know what they are talking about? There are any amount of subjects that have never been treated upon at any convention. Get the right man and pay him well, so that he can prepare himself and give you a talk that is worth listening to. (It has'nt to be me, there are others). Get the best loan exhibition you can get, a hundred prints of well-known professionals or semi-professionals (like Coburn, or repro-

ductions of portrait painters like Alexander, Sargent, Whistler, etc.). Hire a man and pay him to get them together. There are many artists who would gladly take such a job. Have demonstrations in studios of big men, but systematically, a regular course for several days, and have the results shown. Without results it is as fertile as summer winds on a barren shore.

Get the right men for the jury of awards, and pay them for their services. If you cannot afford all this, why not charge higher membership fees and dues? Most of the boys can afford it; they come specially to the conventions to spend money (in most cases it would mean merely the treat of one round less).

And why exclude the dealers and manufacturers? It hardly seems right. They have always been willing to lend a helping hand. And if it was impossible to give interesting conventions with their assistance, how will it be possible to do without them? Not everyone can run a successful convention on two dollars per man and get the hall for nothing.

But I do not write this with the idea of telling you what an AI convention should be. I merely want to warn all concerned against falling into a rut; to do a thing merely because somebody else did it.

Get in line, officers of conventions; put your heads together; evolve something that's worth attention. The men who are loyal to conventions deserve such consideration, and what they want, I am sure, are truly progressive, interesting conventions, that are educational, social as well as practical.

There are plenty of new laurels to win for the man who dares, as the truly great convention has never yet been held.

SIDNEY ALLAN.

NEW YORK, May 15, 1907.

REPLIES TO SIDNEY ALLAN'S OPEN LETTER

Editor, Wilson's Photographic Magazine.

MY DEAR SIR: In looking over the "open letter" of our friend, Sidney Allan, the thought occurred to me, that it were a pity it could not have been placed side by side and published with the many letters of felicitation and congratulation received by our President, Mr. MacDonald. It would have been a complete refutation (if one were needed) of our friend's pessimistic outpourings.

And in all truth, as far as its bearing on the recent meeting of the Professional Photographers' Society of New York, it is the first discordant note, either oral or written, that I have heard or seen in relation to it, and I should characterize that one note as a maudlin rhapsody containing little of suggestion and nothing of anything else.

Mr. Allan should wake up and join with this movement, tending toward the coöperative interests in all that the word implies, not alone for the business suggestions, but toward our general betterment in every way, and I sincerely trust, an upward trend both socially and artistically.

Very truly yours,

A. F. BRADLEY,

President-Elect P. P. S. OF N. Y.

NEW YORK, May 17, 1907.

Editor, Wilson's Photographic Magazine.

MY DEAR SIR: Sidney Allan's opinions on matters photographic are generally worth reading. Though one may not always agree with what he says, it must be admitted that he says it clearly

forcibly, and fearlessly. In the present instance, coming so soon after the undoubted and magnificent success of the annual meeting of the Professional Photographers' Society of New York, due almost entirely to the intelligent, herculean, and unremitting efforts of Pirie MacDonald, his remarks will be sure to meet with much opposition.

It is a pity that Sidney Allan could not have been present at this convention and that he was obliged therefore to get all his facts from the outside. His judgment as to the methods there employed might have been different. If he had undergone the mellowing influences and breathed the atmosphere of jolly good-fellowship which reigned at the festivities at "Little Hungary," he surely would not have criticised this gathering as one that was restricted to *business* purposes alone.

Personally I don't see how a two-day convention could ever squeeze in more good things than this one did. Neither the business, social, nor educational element was crowded out; all were well represented.

The Single Print idea (Allan's chief objection), as managed at this exhibition, was certainly *original*. Every picture was hung on the same line, which assured absolute equality. The universal complaint at all other exhibitions, of *partiality* in the hanging of pictures, was *eliminated*. The scheme was at least interesting as showing each man's opinion of his own work, and while it is undoubtedly true, as Mr. Allan says, that a many-sided workman could not be fully represented by this method because it restricted him to only one example, it is equally true that its advantages entitled it to the test of a public showing. After all is said and done, it must be remembered that this Single Print idea was a *unique experiment*, conceived in equality and full of possibilities. Whether or not the experiment was successful, must be shown by its fruits, and these the future alone can determine.

Yours very truly,

B. J. FALK.

NEW YORK, May 17, 1907.

Editor, Wilson's Photographic Magazine.

DEAR SIR: I have been an attendant at conventions ever since the first one held in Chicago almost thirty years ago, when I was located in a small western town and reckoned with the small fry, if at all. Hence I feel qualified to speak from not only that standpoint, but the one of later years, when it has been my good fortune to know and be known as friend by the leading photographers of this country. Never one have I attended but has been a source of profit and gratification, and I think that barren indeed is the ground which brings forth no flowers from the very lightest scattering of seed.

Perfection has never been reached even in the planning of a convention, our learned friend to the contrary. We are led to wonder how many are really able to determine what are practical business methods as applied to the other fellow. I should be very apt to consider the business standing of whoever sought to tell me what were and what were not practical business talks. At any rate we only need take as much as seems to us good.

I am sure that none are so foolish as to imagine that any convention could furnish offhand ready-made formulæ for a Falk, a Garo, a Hollinger, or a Bradley effect, but I say again, "Barren indeed is the soil," etc. In memory of the days mentioned before, how much would I have given for the privilege of seeing those men work in their own studios, and now, today, I will be one of a club of ten or more who will pay five dollars each to each one of the above-named for the

privilege enjoyed by the New York Society for the asking.

It was not my good fortune to be able to attend the last convention of the New York Society, but I know enough of what occurred to repay me for any interest I might have taken. The Fifty Dollar Prize demonstrations were of themselves enough to repay. The one-print idea appealed strongly to my democratic spirit and awakened the feelings that possessed me so long ago—when I felt that I was in the association but not of it.

The strongest factor of a successful association is thorough organization, and the one all-consuming desire of the officers of an association—and I speak from practical experience—is the harmonizing of the many divided tasks and interests, not only that the convention may be enjoyable but that it shall gather new strength.

Make it a place where we can meet on a common ground. The one-picture idea was the strongest link in the union. Taken as a whole, I believe that the last convention of the Professional Photographers' Society of New York was the best convention ever held in this country.

Yours sincerely,

E. B. CORE.

Editor, Wilson's Photographic Magazine.

DEAR SIR: I think our friend Sidney Allan hit the nail on the head in his open letter when he asked and answered "Why do people come to conventions?" "To keep posted on what the other fellow is doing." That *one* thing has been the most beneficial to me, and that point is what makes our convention interesting.

It is a difficult problem to run a convention to please everybody. We find it so in other lines of business as well as among the photographers. Mr. Allan says, "Why not make conventions interesting?" They *are* interesting and that is the reason they are well attended. I have listened to well-paid men talk at a convention to a small part of its members while the larger number were about the convention hall getting "posted on what the other fellow is doing," and all the time adding a little more knowledge about the "business that cannot be learnt in a lifetime," and when asked why they miss the lecture they say, "I can read the report in the journals."

And I think he is all wrong if he thinks, because few work under the same conditions that Mr. MacDonald does, that his talk is not interesting or beneficial.

I can get pointers from any clever man who is in my business by just *talking shop.*

Mr. Allan says, "A convention is supposed to be a business school as little as an art school." My dictionary says, "A convention is a formal gathering of people for some specific object."

I am sure that the great majority of our members return to their studios after each convention with a renewed determination to improve their work and business methods, all because they attended the convention and got "posted on what the other fellows are doing."

I am always glad to hear a just criticism, but in this case the open letter did not have much weight with me for the reason that the author is not a photographer.

I like to read Sidney Allan's articles, and I like to hear him talk, and if he will find some *good man*, "the right man and pay him well," to teach two hundred men all that they should know about their business in a two-hour talk he will deserve great credit.

Possibly we may find a man who will go to our public schools and in a short time *tell* all the children what they should know.

Let us continue to "*get together*" and

there will always be enough of interest in our convention to pay us for going.

Yours very truly,

CLARENCE H. SMITH.

ROCHESTER, N. Y., May 17, 1907.

Editor, Wilson's Photographic Magazine.

MY DEAR SIR: In reply to your letter and enclosure of Sidney Allan's open letter and criticism of the New York Convention.

Must say a few words in defence of the work done by our President, Pirie MacDonald.

The success of the New York Convention is enough to uphold the principle on which it was established.

The weakest feature of conventions in general has been the inability to keep up enthusiasm from one meeting to the next. The idea of establishing local sections has helped greatly to solve this.

The success of those already in existence is proving it.

The idea of a majority of photographers of any section getting together several times a year (the oftener, the better), and taking up the different topics of interest; the sociability they enjoy; the confidence it creates; the little jealousies it dispels, and the position it places us in where we don't have to take any one's word about our brother photographer—we know him. It establishes a goodfellowship and makes it a pleasure to meet each other. All this must be a lasting benefit to each and a help to the State organization.

This idea, with many of the other good things brought out in the New York Convention, is worthy of imitation, for this is the one best way of keeping up enthusiasm.

Sincerely,

G. TAYLOR GRIFFIN.

ALBANY, N. Y., May 20, 1907.

Editor, Wilson's Photographic Magazine.

DEAR SIR: I have read Mr. Sidney Allan's letter, and am not surprised at the general slaughter of the up-to-date idea in recent conventions.

It seems one of the necessary evils of the time, that as soon as any man, or body of men, break away from the worn and beaten track, there is always some one ready to pick flaws in the new scheme of things.

Mr. Allan may rest content that the art side of photography, and the talks, lectures, and study of art by artists before conventions, is not a thing of the past, but, if I mistake not, will be carefully handled by competent men in the future.

The crying need of the present, not in New York alone, but all over the country, is ways and means to procure for us all a just compensation for the work we do.

I am sorry that my time has been so taken up that I could not answer this most uncalled-for article, for I feel that any good that may come from it will be through the men who carefully analyze and answer it through your columns.

Yours very truly,

RYLAND W. PHILLIPS,

President, Professional Photographers' Society of Philadelphia.

Photographers' Association of Indiana, Winona Lake, Ind., July 8, 9, 10, 11, and 12. "On to Winona," is the heading of an attractive and convincing bulletin issued by this Association. In addition to Mr. W. S. Lively's class instruction, one of the special and instructive features of the Photographers' Association of Indiana, Mr. G. Hanmer Croughton will lecture on the subject of "Art Study as an Investment." The ladies' committee has promised an enjoyable week from the entertainment point of view. Indiana photographers have an opportunity that should not be missed.

Photographers' Association of the Pacific Northwest will hold their convention at Seattle, Wash., September 3 to 6.

THE NATIONAL ASSOCIATION.

LETTER FROM PRESIDENT VAN DEVENTER.

THE twenty-seventh annual convention of the Photographers' Association of America will soon be here, and all members of the craft who are deeply interested in their work will be in Dayton early on August 6, and will not leave until late on the 9th.

Dayton is famous as a clean and beautiful city. Our convention hall is on the banks of a beautiful river and about four squares from the leading hotels and business section. The hotels are first-class, and there will be plenty of accommodation at prices to suit all. We have arranged a program that I think will be pleasing to all. It is as practical, I believe, as we can arrange for a national gathering. There will be one art lecture by Professor Otto W. Beck, of the Pratt Institute. His subject, "How to Make a Portrait out of a Likeness," will be illustrated with enlargements and drawings. Mr. Beck is the well-known author of a book for the art student in photography. There will be a lecture by a prominent Chicago photographer on "The Business End of the Operating Room;" a lecture by a successful Detroit photographer on "The Limit of Prices;" a lecture by a successful Washington photographer on "System;" also a business talk by a prominent stockdealer of Indianapolis on "The Photographer from the View Point of the Photographic Dealer."

There will be plenty of entertainment for the ladies. One evening will be spent at Far Hills, where we will have an informal dance.

Now, you people that can do things with the camera, we want one or more of the best photographs you ever made. There will be twenty-five of the best pictures selected to hang as a salon exhibit, to each of which will be given, while at the convention, a certificate of merit. It is optional whether you exhibit in this class or make it complimentary. Make your entries to C. L. Lewis, First Vice-President, 1217 Madison Ave., Toledo, Ohio.

Don't wait until you reach Dayton to pay your membership fees. If a member, send your dues now and save the time of standing in line before the box-office, which is always a congested place on the first day. If a new member, send $3.00 membership fee and $2.00 dues for the current year to Frank R. Barrows, Treasurer, 1873 Dorchester Ave., Boston, Mass.

Application for space in the manufacturers and dealers' department should be made to Frank W. Medlar, Secretary, Spencer, Iowa.

Now get busy and make those prints, and if you have not already decided to go to Dayton, "Do it now!" We want your help to make the Twenty-seventh Annual Convention the success it is going to be. We want your presence that you may profit by the practical talks by the successful men. You can't get the good out of a convention by staying at home and reading the report in the journals. Go, if you have to close your studio; meet the bright men of the profession; make their acquaintance; absorb some of the good things they have to tell you; combine with your own ideas; go home, and let the people see that your attendance at the convention has been profitable.

Fraternally yours,

C. J. VAN DEVENTER,

President P. A. of A.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA: THE QUESTION OF PRIZES.

BY THE EDITOR.

POSSIBLY many photographers who attended the Niagara Falls Convention last August will have forgotten that a committee was appointed, in compliance with a resolution moved by Mr. C. L. Lewis, to formulate some plan to be brought before the next convention as to the desirability or otherwise of offering prizes.

The committee, consisting of W. S. Lively, McMinnville, Tenn., E. Goldensky, Philadelphia, and D. D. Spellman, of Detroit, is expected to offer a resolution embodying its ideas on the question of prizes at the next meeting of the Photographers' Association of America. The resolution will be discussed and voted upon by all the members of the Association present. It will be distinctly up to the members as a whole to decide this question, and we would urge photographers who expect to attend the Dayton meeting to give the matter some thought so that they may discuss and vote on the question intelligently.

The policy, or rather, lack of any policy, on this question of prizes and awards is one of the greatest shortcomings of the National Association as at present constituted. Had the Association taken up the question that it now faces twenty years ago, and evolved a safe and consistent plan whereby photographers could have their work classified, graded, and awarded some diploma of merit, its usefulness would be very much greater than it is at present, and the question of an Academy to add prestige to the photographer's work would not have to be raised.

This year the Association is committed to a repetition of the Salon idea of last year, selecting twenty-five pictures for the honor of a blue ribbon and the glory of being reproduced in the Association Review some twelve to twenty-four months after they are made. If there are twenty-five good pictures of something like the standard, the plan will be justified. Should the judges, after awarding, say, ten blue ribbons, have difficulty in placing the remaining fifteen, an injustice is worked against the makers of the first ten pictures. Such a thing is not impossible, for we have seen convention exhibitions where the twenty-five best pictures would show a marked inequality.

It is sincerely to be hoped that Messrs. Lively, Goldensky, and Spellman have evolved a plan that may lay the foundation for a permanent and satisfactory arrangement of exhibits and awards. These gentlemen, however, can only suggest; the responsibility will be put squarely where it belongs, and that is upon the members of the Photographers' Association of America. It is theirs to decide whether the Association is to continue its present happy-go-lucky, first-a-prize-and-then-a-salon arrangement, or whether it shall lay down a broad, consistent, and permanent method of exhibiting, judging, and honoring the productions of the photographer. It can be done; it should be done; and the Dayton Convention offers the opportunity.

To Dull Bright Surfaces of Machinery, etc. Make thin cream of white lead and turpentine, add lampblack to make a gray tint, and then one-sixth the bulk of gold size. Paint over, and remove afterwards with "cotton waste" damped with benzine or turpentine.

ALVIN LANGDON COBURN—SECESSION PORTRAITURE.

BY SIDNEY ALLAN.

At the recent One-Print Exhibition of the Professional Photographers' Society of New York, I was greatly astonished to find several prints, notably those of Strauss, Pirie MacDonald, and Partridge, that reminded me—there was no getting away from it—of Coburn's peculiar method of portraying celebrities.

Were those pictures accidents, or did the photographers wish to convey the idea that they also could do that sort of a thing? Hardly. I believe it was done on their part more or less unconsciously. They are all three men who are well posted and keep apace with new achievements. They may have made experiments in that direction years ago, and only now dare to come out with them, because there is a general tendency all over the country for softer and more blurred effects. This, of course, is the influence of the Secession, but it is not imitation. Such things are in the air. I have seen forced highlights, such as Steichen used at times with more bravado than discrimination, in pictures of one-horse-town photographers who had never enjoyed the asthetic pleasure of gazing at a Steichen print.

Of course, Coburn is an extreme. His delicate and poetical pictorial fancies are not for the public at large, nor can his portraiture be applied to common humanity. He is preëminently a depictor of picturesque personalities.

He shows us forms and faces as we may see them in a dream, immaterialized as it were, and yet in a strongly decorative manner. He is in photography what Canière with his nebulous portraits is in painting. Portraits of this sort have no utilitarian but only an esthetic importance. If you get attached to them at all, you get attached to them deeply.

I have not yet arrived at that point. To be transformed into a pictorial phantasm may grant an acute sensation to the fastidiously inclined, but I prefer line and clear modeling to vagueness.

I asked Mr. Coburn the naive question, how he came to see everything in such an abnormal way. He responded with the equally naive answer, that there was nothing abnormal about it; that he considered the way other photographers represented life abnormal.

Well, that is merely an attitude of mind, as I do not believe that any man can actually see things that way, just as little as the impressionist painters see nature actually in color dots. Impressionism is a style of expression, and so is Coburn's method of diffusion.

There is really nothing new in this way of treating subjects, although it impresses me as unfamiliar and in a way unique. Tom Harris made a portrait of me in 1901 (displayed at various Secession exhibits) which was done very much in the same manner; of course, it was a solitary example. It is Coburn's merit to have developed this vagueness of effect into a style of his own. He has mastered it completely, and after once accepting his viewpoint (as a critic should) one will find much of interest in his work.

As may be easily understood, there is in this sort of pictorialism not much scope for character interpretation, at least as we generally understand it, yet there is something in it that is perhaps equally eloquent. As I looked at his Rodin in scull cap, with flowing beard; at his Arthur Symons, very thoughtful-looking,

with one hand at his chin; and his Chesterton; all washy and blurred, it seemed to me that I did not merely see the faces of three distinct personalities, but something beyond; something of their life, their occupation, etc.; a vague impression, such as we may get of the personality of an author perusing one of his books. Is it merely because I am familiar with the work of these men, and does my imagination add this intangible something? Very likely; but is it not rather curious that a photograph can set your imagination going in such a direction? It seems so to me. Steichen never accomplished it. His portraits of celebrities were always self-explanatory, even melodramatic. Coburn is subtler, more poetic and elegant. One only has to look at the two men. Steichen was proud, eccentric, intolerant. Coburn is genial, cheerful, more temperamental. And just as his personality vaguely reminds me of some quaint character that we have seen in daguerreotypes, a young esthete of some Anglicized "Bohemia" (note: stove pipe, finger rings, and aureole of beard), his prints, grave and all, have a certain old-fashioned breadth and charm about them. His Shannon, Carpenter, James, Soloman Soloman, Shaw, Meredith, Sargent, etc., have what the critic calls soul quality. They give us more than we see at the first glance, yet we feel that all has not been said.

Technically this is easy enough to explain. Of course, I do not refer now to photographic technique, but that higher technique of conception. Every painter who thinks (sorry to say there are many who do not, just as there are such photographers), knows that mystery is produced by vagueness. Form ordinarily is something very tangible, but as soon as its outlines are blurred and its texture diffused, it will begin to mystify us. This is—if not the aim—at least the final result of Coburn's work.

Whether these ghostlike apparitions have any permanent place in portraiture, I do not dare to decide. There is rarely an excuse for their existence, and I have never heard it better explained then by a young amateur at the Metropolitan School of Photography. We discussed Coburn, and he asked: "Is that, after all, not the right way, as we have never anything but a rather vague idea about great men?"

Coburn is not so much an impressionest as a symbolist. He knows that the character of a great man cannot be conveyed fully in one portrait; he therefore creates before our eyes an elegant and graceful vision, suggestive by its very formlessness of something subtly intellectual, and lets us add with the help of our imagination what the picture lacks in actual facts.

Although I do not endorse his method, not even for great men, I admire the energy with which he seeks out his subject and the exquisite taste with which he handles them. His management of silhouette and middle tints (never approaching pure white or the deepest black) is masterly. He is today by far the most progressive member of the Secession. Despite its ardent estheticism, his art is sane and healthy. He has heightened the key of tone composition, and it is largely due to him that—to talk with an English critic—"the gloomy glimmering and Aubrey-Beardsly-like straining after effect of American pictorial photography" is changing into something brighter, more beautiful, and less painful to contemplate.

Yet the most remarkable thing, after all, is that one can write about a photographer as I have done, just if he—well, dear reader, you will come to your own conclusion. It is my old argument, well nigh threadbare by this time, but just as true as ever. In my opinion Coburn is an artist, but the term portrait photography cannot be applied to such delicate fantasies as he has chosen to do.

PICTORIAL FOCUS IN PORTRAITURE.

BY C. H. HEWITT.

In a recent issue appeared an inquiry regarding the method of producing portraits in which the head of the sitter is fully lighted, while the drapery is kept in quiet repose. The matter may well be considered in detail, and several methods of producing the effect, all of them quite practical, may be indicated. The main idea, of course, is to emphasize the face by subordinating all the rest of the picture, and the appreciation of the effect produced is an indication of the upward kind of middle-class professional portraiture. The portrait is primarily a picture of a face with characteristic or idealized expression, and though accessories in the shape of furniture, draperies, and so on, are necessary, they must be kept is a position of secondary importance, and not allowed to clamor for equal attention with the face. Attention is thus focussed on the important portion of the picture by reason of the greater contrasts, and in some cases also by reason of the sharper definition, though definition need not be further referred to in the present article. This relatively small area of supreme interest is often termed the "pictorial focus" of the picture, and should be present in all good work.

Lighting to Obtain the Effect. Undoubtedly the best method of obtaining the effect is by proper lighting of the subject. "As the sitter's lighted, so's the picture drawn," and if the operator can see the effect he is aiming at he may be pretty sure the final print will show it also, granted good technique in the shape of proper exposure and development, suitable to the printing process decided upon. The customary flood of light over the whole of the subject naturally gives equal prominence to everything. We see at once, therefore, that the flood of light is just what must be avoided. Many workers when building or altering a studio insist on the side light going down to within a foot or so of the floor, "in order to get plenty of light on the feet." As a rule, too much light reaches the feet, even when the side light is much more than a foot from the floor. But assuming that the best must be made of the studio as it at present exists, the first step should be to cut down the area of top and side light by drawing down the opaque blinds until the open area is from 6 feet to 8 feet square, according to the nearness of the glass to the sitter. The smaller the studio the smaller may be the area of open skylight. The amount indicated will be sufficient for any half length, three-quarter, or full-length portrait. If this area of light-admitting roof is a little above, a little to the side, and a little in front of the sitter, it will be found that the highest light on the face will be in just the right position on the forehead, and that the head will be more brightly lighted than the rest of the figure. But this differentiation is insufficient for our purposes, and if the light is still further narrowed down the modeling of the face will usually become very forced, the shadows too solid, and high lights too brilliant. What is needed therefore, is to throw a shadow over those parts of the subject which are to be kept in repose, and this is undoubtedly best accomplished by the use of secondary blinds, which may be placed nearer to the sitter. A large side screen (which for experimental purposes may be constructed from a background

stretcher, mounted on the usual triangular castored stands, the background, of course, being detached), is placed between the light and the sitter. If the screen is 9 feet high it may be divided into three transverse sections, by means of tightly stretched wires, each wire carrying curtains made of some light material, preferably of a gray color. Pink is often suggested, but the disadvantage of such a shade is that the visual and photographic effects are likely to be dissimilar, whereas with a neutral shade like gray one can see how the plate will be effected. The upper gray curtains may be so arranged as to allow the full light from the skylight to fall on the head and shoulders, the lower curtains being drawn to shade the figure. A further refinement would be to have two sets of curtains, one of paler gray than the other, so that where the local color was dark —for example, a red or black dress— very little light might be cut off, while with light draperies a good deal more might be kept back. For head and shoulder portraits much may de done by the use of a simple opaque head screen, placed so as to throw a shadow on the bust, and yet to be just out of the picture.

The Effect of Development. Some workers prefer to get the effect by local development of the plate. Any average developing solution is employed, taking care that it is so compounded as to give full detail during the earlier stages of development. This developer is poured over the plate, and as soon as the whole of the image is well up the plate is washed under the tap, and development continued locally with a pledget of cotton wool, the developer being applied to those parts where emphasis is required. Of course, all things are possible to the person who, with skill and patience, desires to demonstrate some special method, but the objections to this development method from the practical everyday standpoint, are that working in the dark room and on the partially developed negative it is exceedingly difficult, and sometimes impossible, to estimate the progress of the local development, in relation to the general development. Thus an arm or hand may finally become too light or too dark and dirty-looking. Further, such a method naturally demands the separate development of negatives, a much more expensive method of working—from the time point of view—than development in batches. On the whole, the development method is the one which has least to recommend it.

Local Reduction of the Negative. Safer on account of the operation being performed in full daylight, is the method of locally reducing those portions of the negative which it is desired to keep quiet in tone. If the negative is of average printing quality the persulphate of ammonia reducer will be the one to employ, as the tendency is to reduce contrasts as well as to slightly reduce the whole of the deposits. Here, again, the amount of time required for the work must be considerable, if anything like due consideration and care are given to it, and such work is better left undone if not done with care.

Frictional Reduction. The method by frictional reduction has this to recommend it, that any light patches, such as lighter portions of a dress, may receive more localized treatment, and so be much subdued. Either wood alcohol applied with a piece of clean, dry wash-leather and considerable friction, or the Baskett's globe polish and terebene reducer, or dry powdered pumice, may be used according to the preference of the worker. The results depend more on him than on the special medium selected. Great care is needed to avoid irregular workings, and for general areas the larger the wash-leather, pad, or cloth used for applying the Baskett's mixture the better.

Sunning Down the Print. In one way this is the simplest of all the methods. The print is finished, printing in the usual way, and then shading the face and upper half, the margins are darkened down by exposure to light, turning the print round so that each edge in turn is subjected to light action. With platinum and carbon prints there is some danger of carrying the "sunning down" too far, or not far enough, though by means of a strip of P.O.P., held in the light at the same time, it is easy, with a little practice, to hit the mark. It should be noted that with some papers the color of the image formed by light varies with the speed at which that image is produced, and that a tint formed through clear glass will often be of quite a different shade to the actual negative-printed image.

Importance of the Background. Finally, a word may be said as to the importance of the background in pictures of the kind referred to. It is of no use subduing the draperies and figures generally if the background attracts as much attention as the face. Generally speaking, there should be some gradation in that part which comes against the head, and the ground should be neither too dark nor too light. The degree of contrast between the face and the background will naturally determine the contrast required between the face and the rest of the figure. It must always be remembered that dirtiness or muddiness of the accessories and draperies is not what is wanted, and if tone relationship is palpably false this is the effect which will be produced.—*British Journal of Photography.*

LATITUDE IN EXPOSURE AND CONTROL IN THE DEVELOPMENT OF CARBON PICTURES.

BY E. W. FOYLEE.

THOSE who have only worked the carbon process to a limited extent, or, perhaps, whose knowledge of it is confined to seeing it demonstrated at meetings, seem to have but little conception of the latitude there is in the exposure of the prints and the control one has in their development. Many I know have hung back from taking up the carbon process simply because it does not show a visible image in the printing, yet these same people successfully practise bromide printing where there is, practically, no latitude in the exposure, if the finest results are required.

In the carbon process that is not the case. For example a print may be exposed for half, or less, what would be the, theoretically, correct time. Another for three or more times the right one, yet both may be made good pictures that cannot be distinguished from each other either in depth or color. That is not the case in errors in exposure in bromide printing. Seeing that the errors in the exposure to the extent just mentioned (which, by the way are scarcely likely to occur in practice), can be successfully remedied in the development of the image, to me it is a little extraordinary that those who desire to show their individuality in their pictures do not practise the carbon process more than they do, as it is much simplier in its manipulations and involves less trouble than the processes they usually employ; particularly as any "faking" in the work is less observable in the finished picture than in other methods.

The development of a carbon picture,

it is now tolerably well-known, is simply the washing away of the unchanged, by light, pigment gelatin; or rather dissolving it off in the proportion as the light has not acted upon it. By way of example, let us take a print, the exposure of which is doubtful. It may be considerably under, or it may be much over-exposed, or it may be rightly exposed, but we do not know. This is how we proceed. The exposed print is mounted on its support—either temporary or permanent—and allowed to rest for the usual time. It is then put into warm water (temperature about 105° to 110° F.) and allowed to rest till the pigment gelatin is seen to be extending from its edges. Then if, on raising a corner of the backing paper, it shows signs of coming away easily, it is stripped off. If it should appear to hold on tenaciously it is allowed to remain soaking for a few minutes longer, for if force is used, fine lines may be formed which may not be got rid of before the development is completed, particularly if the print should turn out to be much under-exposed.

As soon as the backing is removed, after removing air-bells—which may be done with the finger, as there is but little danger of injuring the film at this stage—the print is turned face downward and allowed to rest for two or three minutes. It is then turned face upward and the water laved over it a few times with the hand. At this stage it will be easily recognized how the exposure has been. If the high lights show very pronounced, while the shadows are still clogged with color, under-exposure, more or less, is indicated, but still a good picture can be obtained. In this case the print is transferred to another dish of water at about 80° F., or less, and allowed to rest. The effect of the water at this temperautre is to dissolve the gelatin upon which the light has not acted, while it will have no material effect upon that upon which it has partially acted. The bichromated film, if the tissue is in good condition, is perfectly soluble in water at the above temperature, while if it has had any action at all it is not, so that the absolutely unacted upon portion, which always exists in the coating next the backing papers, dissolves away freely while the other remains intact. When those portions of coating have been dissolved away, the temperature of the water may be gradually increased and the development completed, but it should be kept as low as will suffice to develop the picture. I have here taken as an example an extreme case, say where the print has had but a half, or less, of the correct exposure. If, however, it has had but moderate under-exposure, we simply have to put it into water at, say, 95° to 100° F., when it will develop evenly without further trouble.

We will now consider the question of over-exposure, and that is more easily remedied than under-exposure. If when the paper backing is stripped off, and after remaining in the water for a few minutes, the lights and shadows seem to be clearing evenly, the exposure has been right. Should, however, this picture appear too dark—both lights and shadows—over exposure, more or less, is indicated. In this case the temperature of the water is increased to 120° or 130° F., or in extreme cases to 150° and the prints allowed to soak in it, when they will become reduced evenly all over. It is simply a question of time and temperature. Here it may be mentioned that it is better to give more time at a moderate temperature than to force the development at a higher one. In extreme cases the prints may be put into hot water and remain soaking all night in the cooling water, and the temperature increased and development completed in the morning, as in the long soaking the solubility of the pigmented gelatine has been increasing, even in the cold water.—*Photo News.*

ELECTRIC LIGHT PORTRAITURE

By Scott's Studios, Ltd., London, England

ELECTRIC LIGHT PORTRAITURE

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By Scott's Studios, Ltd., London, England

ELECTRIC LIGHT PORTRAITURE

By Scott's Studios, Ltd., London, England

U. S. DISTRICT ATTORNEY J. W. THOMPSON

By Miss Mary Carnell, Philadelphia, Pa.

ETCHED PORTRAIT
By Van Loo Studio, Toledo, Ohio

ETCHED PORTRAIT

By Van Loo Studio, Toledo, Ohio

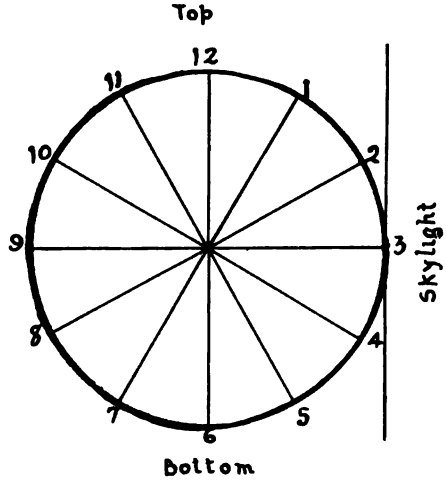
"SIDNEY ALLAN"

By B. J. Falk, New York

Made at the demonstration before members of the Professional Photographers' Society of New York, April 2, 1907

UNDER THE SKYLIGHT.

BY FELIX RAYMER.



We often hear the assertion made: "The principle thing in making pictures is to get a good negative; if that is all right the battle is won." But notwithstanding the fact that almost every photographer will agree in this, I am satisfied there are not ten per cent. of them that really get their negatives right. Too often is it the case we leave something for the retoucher to do, or the printer, or perhaps the finisher. On particular features so many are lacking as is the most important of all—the lighting. Of course, I know all make some lightings during a year's time that are good, some make more good lightings than others, and very few indeed, that make half of their lightings what might really be called good.

The reason for this lack of good *uniform* work is largely due to the operator not fully understanding, not only his skylight, but the *floor space under his light.*

A light of a given size will admit just so much light and the amount of space covered by this light in its fine strength is the amount of floor space available for making portraits or groups. When the operator steps out of this space, he is handling a weakening light, that is, the farther outside this space he poses his subject the less control he has of his light, for the light is losing in strength and the operator is really handling an "unknown quantity," so to speak. As long as he works within the limits of his light, or confines himself to the floor space covered by his light, it is merely a matter of close study on his part until he so familiarizes himself with every inch of that space, that he will be able to tell exactly the effect of lighting he will get even before he seats his subject under the light.

It is this knowledge of the effects to be secured by having the subject posed at certain stations, if I may be allowed the term, that secures *uniformly* good negatives. When this knowledge is acquired the operator will make as good work on Monday as on Tuesday or any other day. Until he does acquire this knowledge his negatives will be good one day, and bad the next and so on. In this series of articles, I expect to show different effects of lighting, on different subjects, and that I may be fully understood, I shall make use of a small diagram which will appear at the head of each article. This diagram has the form and markings of an ordinary watch dial, and represents the floor space under any skylight. If one so desires, and I think it a capital idea, he can have the ring of the dial painted under his light, although this is not absolutely necessary if he can form the ring and markings in his mind's eye.

This ring should conform to the size

of the light. If the light is ten feet square, the ring should be ten feet in diameter; if the light is sixteen feet square the ring should be sixteen feet in diameter. If the skylight is a single slant and is longer than it is in width, for example 10 x 14, the ring must be a compromise between the two, which would make it twelve feet in diameter. If the skylight is a double slant, treat it as though it were a single slant, measuring from the bottom of the sidelight clear up to the top of the skylight; then measure its width, and make the ring accordingly; for example, if the entire light measures twenty feet in length and fourteen feet in width, the diameter of the ring should be seventeen feet. This ring represents, as stated before, the floor space at the disposal of the operator. If he goes outside the ring he goes beyond the capacity of his light. I do not mean to say good work cannot be made outside this given floor space, for I have seen some exquisite work done in that manner, but it was made by a crack operator, and it must be remembered that such an operator will make good work anywhere and under all conditions. But these operators are few and far between. Hence I would suggest that the operator who does not feel perfectly sure of himself adopt this dial ring until he learns what every station will give him.

I also desire to call attention to the fact that this ring is in relation to the entire opening of the light; no curtains are to be used if this plan is followed. If curtains are used, they of course reduce the size of the light, and when that is done, the size of the ring must be reduced, as the floor space covered by light from a small light cannot be as good as by a large one.

I now call attention to the portrait accompanying this article, which as will be seen is a broad effect, commonly known to operators as a plain lighting made in "three-quarter" view of the face. As I understand it a "three-quarter" view of the face is one where the ear on the side of the head farthest from the camera is just out of sight. Now to secure this effect of light and view of the face the

MR. G. (Papa) CRAMER
Photo by Felix Raymer

subject should be posed at station 11, and the camera at station 5. The subject should be turned toward the camera until the ear on the shadow side of the face is just on the point of coming into view from the camera; when this is done, every high light and every shadow will be in its proper place. The highest light will fall on the forehead and down over the nose, the next on the upper lip, then on the chin, and finally there will be a warm half tone or low high light on the shadow side of the face; there will be a small spark of light in each eye, known as the catch light.

If a still broader effect is desired, but the same view of the face, move the subject to station 10 and the camera to station 4, and proceed as before. If a full broad flat effect is desired the subject should be at station 9 and the camera at 3.

It will be seen that the camera is always placed opposite the station occupied by the subject and this should be so where a "three-quarter" view of the face is to be made. For example, if the subject is at station 11 the camera is in a direct line opposite at station 5. If the subject is at station 10 the camera is moved in a direct line opposite at station 4, and so on for any of the stations. Now it may be that a strong contrasty effect is desired; if so, place the subject at station 12 and the camera of course, at 6, and follow instructions as given above. When the view of the face has been secured as directed, it will be noticed there is no "catch light" in the shadow eye, and very little or no light on the shadow cheek. It is the absence of this light on the cheek, and the catch light, that gives the contrast, due to there being a strong light on the light side of the face.

If a front view of the face is desired, follow directions as given except to move the camera one station farther to the left or toward the shadow side of the figure. For example, place the subject at station 11 and have him turn to the light until the ear on the shadow side is about to come into view from station 5, when this is done move the camera to station 6 and a full front view will be obtained, but the lighting is of course the same as for the "three-quarter" view.

CARBON PRINTS UPON ARTISTS' CANVAS.

BY A. J. JARMAN.

In a general way carbon prints are made by direct development upon single transfer paper from a reversed negative; but where this is not possible, where the negative cannot be reversed, then the process of double transfer must be employed, as in the case of the usual negatives made in the average work of the photographic studio.

Where the double-transfer process is employed there is no end to the various applications to which it can be put. One in particular is the transfer of a carbon print upon the oil-painted canvas such as is used by the artist for painting in oil color. Many persons in their endeavors to produce this class of work have failed mainly from the want of correct knowledge in the method of manipulation. The present article is intended to deal with this particular branch of carbon printing, embracing the essential practical points for successful working.

Large numbers of carbon prints that are imported into the United States today are produced from rare and valuable oil paintings have the effect of canvas. They, however, are not produced upon the material used by the artist. Any portrait, no matter whether head and bust, or three-quarter figure, when produced say in sepia and transferred to canvas will have the effect of a portrait painted in monochrome. The only near approach to this is a print made upon etching paper. Upon inspection, it will be easily discovered that it is not a canvas carbon print.

The canvas best suited for this class

of work is that of the whitest kind. Some of this material has a decided stone color, of a somewhat yellowish-cream tint; this is not so well suited, because there is always a faint tinge of color in the high lights of the print to be transferred; this tones down any tendency to harshness in the high lights and produces a picture harmoniously balanced of a very satisfactory character. The canvas already attached to a stretcher can be purchased of any artist's colorman in sizes to suit any kind or size of photographic negative.

A 3 per cent. solution of bichromate of potash is well suited as a sensitizer for this class of work. The following sensitizer has been employed by the writer at all times successfully for this particular purpose:

Bichromate of potash (C. P.)	3 ounces.
Filtered water	100 ounces.
Glycerine	1 ounce.
Carbonate of ammonia	2 drams.
Salicylic acid	40 grains.

Dissolve the salicylic acid in a few ounces of *hot* water, being a part of the 100 ounces given, and add this to the mixture at the time the salts are being dissolved. The above sensitizer must be filtered through absorbent cotton previous to use.

The following gelatine substratum must be made, and kept ready to hand, this being a very important item for successful transfer. It should be made in the inner vessel of an oatmeal kettle, or may be made in an earthenware crock, with water boiling around it. This substratum will keep in good working condition for two weeks, if kept in a cool place.

Heinrich's hard gelatine	2 ounces.
Granulated white sugar	½ ounce.
Water	30 ounces.

Allow the gelatine to soak for half an hour, stir well, then add the following solution, made and used *hot:*

Chrome alum	20 grains.
Water	2 ounces.

This must be added to the hot gelatine solution drop by drop, stirring well at the same time. This quantity of chrome alum will not cause the gelatine to become ropy, as it is termed, or semi-coagulation. Add lastly 1 ounce of pure alcohol, drop by drop, and stir thoroughly. This may now be allowed to stand for a few minutes to allow the air-bubbles to rise to the surface and disperse, when it may be filtered through two thicknesses of cheesecloth that has been wet and wrung nearly dry; a wide-mouth bottle and an ordinary glass tumbler form very convenient receptacles for this purpose.

As soon as the substratum is ready and a carbon print made upon flexible support is also in readiness, the canvas must be prepared in the following way: Remove the tacks that hold it to the stretcher, lay the canvas down upon a clean board, then rub the painted side well over with a warm solution of soda, made up of

Sodium carbonate (granulated)	1 ounce
Hot water	1 pint.

Use a tuft of absorbent cotton dipped into the soda solution. Apply this with a light pressure, rubbing all over the surface in circles; take care not to rub the paint off so as to expose the bare canvas; wash the canvas under the faucet, and observe whether the water adheres all over the surface; if it does, the canvas is ready for use; if it does not, and is repelled upon parts of the surface, then the soda solution must be again applied until the water adheres all over evenly. The carbon print upon the flexible support must be allowed to remain in water for about fifteen or twenty minutes before attempting to transfer, so as to make the support itself very pliable.

The canvas must be allowed to drain well; it must then be laid back down

upon a smooth board, the warm gelatine solution poured upon the surface, a large pool in the centre will answer. Now take the flexible support with its print, bend it like the letter U, allow the middle to touch the centre of the pool of gelatine, and lower the ends slowly. Cover the back of the flexible support completely over with a piece of India rubber cloth, and apply the squeegee from the centre outward, forward, and backward; gradually increase the pressure until all the excess of gelatine mixture has been squeezed out and the canvas and its attachment lie flat.

A point of importance must now be attended to, so that the adhesion of the carbon print may be perfect from the edges inward; because, if any lifting of the transfer takes place at all it usually starts from the outside edges: Take four strips of wood, half an inch wide or five-eighths and about three-sixteenths of an inch thick, which should be previously coated with shellac varnish and dried; place these around the edges of support and canvas, *upon both sides;* these are held in position by a number of wood clips so as to grip the canvas and support perfectly. The whole is now hung up to dry, which must not be forced by heat—from twelve to twenty-four hours is the usual time—when the wood strips may be removed. The support will now come off with ease, leaving the carbon print transferred perfectly to the canvas.

The next thing to be done will be to re-attach the canvas to the stretcher, which is accomplished as follows: Place the canvas, back down, upon the squeegee board and flood the surface with warm water, to which about 2 ounces of the substratum mixture has been added to each quart of water, or the canvas may be dipped bodily into this. The canvas, after soaking for about two minutes, must be removed, and then dipped into clean warm water to rinse it, and drained well. Place it now, back down, upon the stretcher; adjust it in position, paying particular attention to the right amount of margin; proceed to tack the canvas at the outside edges, say along the top edge. This being done, stretch the canvas at the centre of the lower edge, place a tack in the middle, and proceed in like manner all around the canvas, in precisely the same manner as it was originally attached. When this is completed place it aside to dry. When thoroughly dry it will be found to be stretched evenly and tight, and when struck upon the back with the forefinger will produce a ring ing sound like the head of a drum.

While the carbon print presents the appearance of a very fine painting upon the surface in monochrome, with no tendency to split or crack, the adherence upon the oil-painted surface is all that can be desired. Such prints as these realize large sums of money to the producers and form a very lucrative branch of the photographer's business.

If there should be any tendency to slight blistering in any part of the transferred print, it can be easily remedied by pouring over the surface a fairly hot mixture of 3 ounces of the substratum solution to a pint of water when the flexible support has first been removed, and the print allowed to dry before being treated for reattachment to the stretcher. After the canvas has become dry, any tendency to blistering will have vanished; it may now be wet as described and attached to its stretcher.

It will be advisable to allow a three-eighths of an inch safe-edge to all prints from 11 x 14 up. For work of this description this will ensure a much firmer hold upon the edges of the canvas, which at all times show a great tendency to cockle.

It will also be found that there will be no tendency for the carbon film which forms the image to chip or peel if these

directions are followed. The film is not only firmly attached, but possesses a pliability that is not obtained when any hardening process is used; while at the same time such a print forms a perfect and permanent basis for working up in oil colors, and should these colors be in monochrome the resultant picture, whether portrait or landscape, will leave nothing to be desired. These pictures can be varnished or not, to suit the taste of the artist.

The process as described will answer every purpose during the mild months of the year. In very hot weather the gelatine substratum mixture should have a few drops of a 10 per cent. solution of pure carbolic acid added when first made up, and 4 ounces less water, the chrome alum remaining the same. This addition will completely prevent any decomposition setting in and thus preserve the adhesive properties of the gelatine. Should there be, however, at any time, any signs of decomposition in the substratum mixture, discard it at once and make up a fresh batch, otherwise failure will be the result.

The bichromate sensitizer will keep for some time and may be used for half a dozen times, being filtered after each sensitizing. When say half a dozen batches of tissue have been prepared it will be advisable to throw the solution away and make up a fresh quantity. By attention to these little items there will be no fear of non-success, and the production of work to one's satisfaction.

THE PRESERVATION OF DEVELOPERS IN SOLUTION.

BY CHAPMAN JONES.

THE addition of preservatives to developers is a matter that can hardly be dealt with in inclusive terms because of the differences of developing reagents. But there are certain broad general principles that may be considered as of general applicability, though not to the same extent in every case. It is therefore convenient to select a definite example, and for this none is better than pyrogallic acid.

There are two distinct kinds of preservation, namely, the preservation of the solution when it is kept in stock, which is a mere convenience, and the preservation of the developer while it is acting on the plate, which is a necessity. In both cases the action of the air has to be considered, for all our manipulations take place in it, and the exclusion of it is a problem almost comparable to the exclusion of water when working at the bottom of the ocean. The developer has to take away bromine from the silver bromide that has been rendered unstable by the action of light. Bromine is very similar to oxygen so far as its tendency to combine with other things is concerned; therefore, as the function of a developer is to combine with bromine, it must almost of necessity be readily able to combine with oxygen. One-fifth of the volume of the air is oxygen. So the preservation of a stock solution consists in keeping the air from it as much as possible, and putting the solution into that condition in which it is least able to absorb oxygen: and it is a matter of days, weeks, or even months. The preservation during development must be carried out in spite of the presence of the air, for it can very rarely be excluded; but the solution in this case must be in an active state, or obviously it will not develop, while it has to be kept in condition for little more than a few minutes.

During the development the preservative invariably used is sodium sulphite. Potassium sulphite would also serve, but it is not commonly obtainable, and no acid sulphite, like potassium or sodium metabisulphite, will serve as such, because the solution must be alkaline. An acid sulphite in the presence of an alkali is changed at once into a neutral sulphite, some of the alkali being neutralized by the acid. Acid sulphites (bisulphites) are therefore of no more use in development than neutral sulphites. The disadvantage of acid sulphites is that, as an unknown quantity of the added alkali is neutralized by them, the amount of alkali remaining must also be an unknown quantity. The photographer who develops tentatively may add a little alkali, and his developer may remain acid and therefore inert; and so he may waste much time in waiting for development to begin without the possibility of knowing that the condition of his developer renders it impossible. In this connection it may be remarked that litmus paper is not serviceable for ascertaining whether a solution is acid or alkaline when it contains a sulphite.

The preservation of a stock solution is best effected by excluding the air from it as much as possible. The less solution there is in a bottle the more air there must be. The air that is confined in the bottle will in a short time be deprived of its oxygen by the developing solution, and the remainder of the air is inert. Therefore the bottles used should be as nearly filled with solution as possible, that there may be only a very small bulk of enclosed air, and the bottle should be opened as few times as possible, that the enclosed air may be but seldom changed. This means practically that a number of small bottles should be filled and closed, so that each when once opened will soon have its contents used up. It is not necessary to put all the solution at once into small bottles. If, for example, 20 ozs. is to be made and 2 ozs. is the amount that will be generally used in a conveniently short time, one 20-oz., one 10-oz., and five 2-oz. bottles may be provided. The 20 ozs. will fill the six other bottles, and when the five smallest bottles are emptied the 10-oz. bottlefull will serve to refill them.

So far as the solution itself is concerned, and regarding only its preservation, it should be concentrated and acid, because under these conditions it absorbs oxygen more slowly, and apparently in a smaller proportion. The best acid to use is sulphurous—not the solution of the gas that goes commercially under that name, for it is not dependable with regard to either strength or purity, though it may be excellent when bottled up by the maker. An acid sulphite should be used, and of these potassium or sodium metabisulphite is doubtless the best of those readily obtainable. If neutral (or ordinary) sodium sulphite is used, this may be acidified with almost any acid, but then a fresh salt is introduced which may not be without action. Sodium sulphite with sulphuric acid gives an acid sulphite and sodium sulphate, and the sulphate is certainly not advantageous even if it does no particular harm during development. If citric acid is added sodium citrate is produced, and this is a notable and useful restrainer, good if needed, but not always required. But the acid sulphites lead to the production of nothing but sulphites.

The disadvantage of an acid solution when it has to be used for development has already been indicated. If a developer of uniform composition is always employed, as by mixing predetermined quantities of two solutions, the amount of alkali will, of course, always be sufficient to neutralize the acid and leave a sufficient excess of alkali; and there is no disadvantage to the mere rule-of-

thumb man. But the substances in the solutions are not the constituents of the developer, because changes occur when they are mixed. The ordinary worker will, therefore, not know the formula of the developer that he is using, nor be able to compare it with other formulas. Indeed, there will be uncertainty to one who is used to chemical calculations, because of the want of stability of acid sulphites, and of the partial production of sodium bicarbonate when sodium carbonate is added in excess to an acid solution. Those who like to know what they are doing must leave acid sulphites alone. The ordinary (neutral) sulphite is quite sufficient preservative even for stock solutions in well-closed bottles if the solutions are not kept unduly long.—*Practical and Pictorial Photographer.*

ONE OF THE GREATEST ACHIEVEMENTS OF PHOTOGRAPHY IN AMERICA.

At Winona Lake, Indiana, one of America's greater Chautaqua assemblies, a building has been erected by photographers, known as the Daguerre Memorial Institute, and dedicated in honor of M. M. Daguerre, who presented photography to the world. This perhaps the first and only building known to have been erected in the interests of professional photography, wherein a permanent salon and photographic museum has been established and maintained. Several thousand dollars' worth of pictures are now hung upon its walls, and its future only bids a higher honor for the profession as an art, as a science, and as an industry.

This is not only a monumental building for the professional photographer, but its greater fame is intended to be one of acknowledged merit and general publicity, and to assist in raising the moral, the educational, and professional standard to a higher plane, and ultimately encourage the organization of other institutes of a similar character. It is the beginning of a new era in the advancement of photography. It is building a character for the future of the profession.

The managers of this institute having resolved that the highest honors possible be given to the works of the masters, that they be rewarded for their labors, have decided to award a diamond medal for the best picture to be hung at their annual exhibit on July 8–12, 1907. This medal will be known as the "Diamond Medal of Honor" and will bear an inscription of the title of the picture for which it was awarded, and the name of the institute by which it was given. The picture receiving this honor shall be hung in the salon as a permanent exhibit, its award being inscribed thereon, with date and name of maker.

In addition to the "Diamond Medal of Honor" the Photographers' Association of Indiana has decided to award a gold, silver, and bronze medal for the pictures which may have been chosen as second, third, and fourth in merit, respectively. Pictures winning these honors shall be hung in the salon as a permanent exhibit. In addition to the medals awarded, pictures which may be chosen as worthy to be hung in the salon as a temporary exhibit will be awarded by the Daguerre Memorial Institute a certificate of special distinction.

CONDITIONS OF AWARD.

Honors are open to the world—Indiana only excepted.

There will be no entrance fee; no restriction as to when negative was

made; of any size, framed or unframed. The only qualification required is *picture must have title*, as same will be catalogued and known in the future by title and maker. No photographer a resident of the State of Indiana will be entitled to enter for the honors as given in 1907. Transportation charges must be paid, or pictures will not be accepted. Pictures to be addressed to H. E. Koch, Winona Lake, Ind., care of Indiana Association of Photographers, and reach Winona Lake not later than July 3, 1907. For further particulars address, Geo. J. Parrott, Ft. Wayne, Ind.; Geo. G. Holloway, Terre Haute, Ind.; C. W. Neiswanger, Muncie, Ind., Trustees, Daguerre Memorial Institute.

PRACTICAL NOTES ON BROMIDE PRINTING.

THE title of this article requires a word of explanation. It is assumed that the reader is already familiar with what may be termed the regular routine of making a good "straight" print from a fairly good negative, but desires now to extend his knowledge to such procedures as may enable him to make the best of a poor negative, to control the results from any negative, to improve upon previous work; in a word, to do something better than the "usual thing." His object is twofold, viz., to improve his technique, but more especially to learn how to exercise personal control over the print with a view to pictorial expression.

Speed of the Paper. By the use of a slow or rapid paper we can exercise far more general control over the resulting print than many workers suppose. For the moment we may count gaslight papers as slow bromide papers; next, we have ordinary bromide papers; and, finally, rapid bromide papers: *i. e.*, three great groups. The slow papers may require minutes of exposure where the more rapid require seconds. The slower the paper the more contrastful the print, other things remaining comparable. Thus a bright print is possible from a weak contrast negative with slow paper, and a soft print from a strong contrast negative with rapid paper.

Surface of the Paper. The smoother papers give more detail generally. This is more noticeable in the lighter tones, but the darker parts are likely to look more solid and heavy. Rough surface papers suppress fine detail, but give more transparency in the shadows and darkest parts. The matt and platino matt papers give a general softness of effect, but this is often accompanied by heaviness and deadness in the shadows. This is particularly noticeable in the case of pictures showing rather large patches of dark. The carbon surface papers meet this difficulty by giving much more transparency in the shadows without aggressively glossy high lights.

Strength of Printing Light. No doubt the reader has been told over and over again that equivalent exposures vary with square of the distance from the light: thus; 1 foot, 1 second; 2 feet, 4 seconds; 3 feet, 9 seconds; 4 feet, 16 seconds; and so on. This is broadly true, but if we compare these equivalent exposures for widely different distances, we shall notice slight but important differences, which we may find very helpful on occasion. Now, the theoretically equivalent exposure at 1, 5, 10, 15, and 20 feet are in the proportion of 1, 25, 100, 225, and 400 seconds. Suppose we have a medium density negative, which requires 3 seconds at 1 foot from the light. The equivalent at 15 feet would be 3×225 seconds or $11\frac{1}{2}$ minutes. Now,

let the reader try for himself the experiment of exposing one piece of paper at 1 foot and another piece at 15 feet for these two respective equivalent times, and develop the two prints for the same time in the same dish. Probably he will notice that the 1 foot print is not so contrastful as the 15 foot print. This then gives a means of slightly modifying contrasts without changing the kind of paper used. Now, the slower the paper and also the more contrastful the negative, the more shall we notice a difference between printing near to and far away from the light and giving equivalent exposures.

Fixing the Printing Distance. This point has been dwelt upon somewhat at length because it leads up to a practical matter of great importance, viz., the best distance to make the exposure. My own procedure is as follows: The negative is looked through against a strongly lighted sheet of white paper or a piece of opal glass, and it is determined which is the densest part which must show shadow detail in the print. Just behind the printing light, which is a short, stiff gas bracket projecting from the wall, is fixed a sheet of white card. A hole, about 2 inches square, is made in a sheet of card. This is laid over the negative, so as to show the dense part just referred to, which must show detail. The negative and card are held at arm's length, and looked through not at the flame, but at the most brightly lit part of the white card just behind the flame. I then move to or from the light until I can just see the required detail in the negative, and that fixes my printing distance. If preferred, one can have a ground glass or opal glass globe over the gas flame and look through the negative at the gas globe in that case. (This method applies to bromide, but not gas light, papers). In practice I find my bromide paper printing distances from the gas flame vary from 1 foot for very strong (carbon printing) negative to 8 feet for soft negatives suitable for enlarging; while what may be called a good platinotype negative usually is printed at 2, 2½, or 3 feet.

When in doubt as to whether the printing should be done at, say, 2 or 3 feet, I elect to use the longer distance because this gives one the great ease of exact exposure. For instance, suppose the two equivalent exposures to be 4 and 9 seconds, or something proportional to those numbers. Now, an extra second too much or too little at 2 feet would be an error of one-fourth the total time, but an extra second at 3 feet would be only an error of one-ninth. That is to say, the mistake of a second at 2 feet would be twice as important as 1 second at 3 feet.

Importance of Exposure. No doubt the reader has again and again had it before him that no care should be spared to ascertain correct exposure, but probably he has not fully realized this point, and will not do so until he has made the following experiment: Suppose that he has a quarter-plate negative which gives a fairly good print with 10 seconds exposure at 2 feet from his gas flame—along the longer side of his printing frame makes marks at ½ inch distances. Expose the whole print for seven seconds, then cover up the first half inch and give one more second; then cover up the two first strips and give one second. In this way our print is exposed in strips of 7, 8, 9, 10, 11, 12, 13, and 14 seconds. On development it will be noticed that the differences are slight, yet it is quite likely that the 9 or the 11 second strip may show just enough difference to make the worker prefer one or other of these to the 10 second strip.

The Longer Distance between the printing frame and the light offers the further advantage of giving one more time to do local dodging, shading, vignetting, etc., seeing that the

greater distance means the longer exposure.

The Dark-room Light. For high-class work and nice discrimination in delicate pictorial effects, it is of first importance to be able to see, and see thorougly well, what we are doing. This means a safe dark-room light, and plenty of it. The dark-room lamp-window should not be less than a foot square. The light filter may be made of a piece of canary medium, placed between two sheets of clear glass. Another plan is to coat two pieces of clear glass with colored gelatin in the following way: Soak 20 grains of gelatin in cold water until quite soft and swollen. Then drain away the superfluous water. In tepid water make a saturated solution of naphthol yellow. Of this, take 1 ounce and add to it the swollen gelatin. Warm gently on the oven top until the gelatin is thoroughly dissolved. Carefully level one of the plain glasses, having previously made it very slightly warm (say 70° F.) by holding it before a fire for a minute or two. Pour on the naphthol gelatin, and spread it all over the plate with the aid of a glass rod, but be careful that it does not overflow the edges of the plate. Then let the plate dry in a horizontal position. Treat the companion sheet of glass in the same way, but using a saturated solution of Aurantia in place of naphthol yellow. When *quite* dry, put the two coated surfaces together, and use as a yellow window for the dark-room. N.B. —A foot square of glass will only require a portion (probably less than half an ounce) of the coating solution. Begin by pouring slowly on the middle, and spread with the glass rod until it just reaches the edges of the plate.

Choice of Printing Light. The pictorial printer will find it useful to know that by varying the kind of printing light he can exercise a measure of control over his contrasts. The stronger—*i. e.*, more actinic—the light, the less the contrast. Thus, if the negative be somewhat hard and a soft result wanted, he may employ daylight, *e. g.*, a brief exposure (to be found only by trial); a window facing a north sky is the best. It must be remembered that what may be a suitable length of exposure on Monday may not be the right time on Tuesday. Then again, magnesium ribbon is a very quick printing and penetrating light for bromide work. It has the advantage over daylight that it is constant, *i. e.*, an inch at 3 feet one day is equivalent to the same quantity at the same distance next day. Incandescent gas is a stronger, quicker light than an ordinary gas flame.

If a feeble light is wanted, as in the case of thin, flat, weak negatives, we can get this by a paraffin lamp or even a candle flame. An opal glass globe may be put around an ordinary gas flame, or we may cover the face of the printing frame with yellow glass or yellow tissue paper.

(Fix, wash, and dry an unexposed dry plate. Then it may easily be stained a good clear pale yellow by immersing it in a solution of picric acid.)

Strength of Developer—i. e., varying the quantity of water—is a most useful power on occasion. First of all, diluting the developer slows its action and thus gives more time to judge the exact moment for withdrawing the print. Theoretically the exposure should be such that by the time the details in the highest lights are just developed the shadows should be also properly developed and that prolonged development should have no further visible effect. These ideal conditions very seldom obtain. Usually the contrasts of the negative are a little too strong or too weak. If too weak our remedy is to aid them by using a more feeble light, or increasing the distance between the light and the negative, or by printing through yellow glass. But where our contrasts are

too strong there may be reasons why we do not wish to change either the printing light or its distance. In such case our procedure is to give an exposure sufficiently long to give developable detail in the highest lights. Normal developer with an extra contrastful negative gives over developed shadows by the time the detail in the high lights are out. Our remedy is now to dilute the developer with two, four, six, etc., times its volume of water. This slows the action and also gives a less contrasty print, at any rate in the early stages of development. We can therefore withdraw the print as soon as high light detail is attained, and by adjusting the degree of dilution (only found by trial) to our needs, it is possible to arrange matters so that the high lights and shadows arrive at their desired condition together.

Judging development is not always quite so easy as some beginners think. There are two disturbing factors to be reckoned with. First, the light of the workroom. The print looks darker than it really is when seen in the yellow light. This difference is practically constant, and so one soon learns to allow for that. The other factor is the modification of the print made by the fixing bath. This varies somewhat with different brands of paper. Then again it varies with different developers, and also with the speed of development. A quickly developed print may come out of the fixing bath lighter than when it went in, while a slowly developed print will generally appear to gain a little strength during its passage through the fixing bath.

Choice of Developer. The beginner is strongly advised to select some one developer and stick to that until he has attained a moderate experience and knowledge of what it will and will not give him. Amidol, metol-quinol, or rodinal would be suitable for a beginner. It matters not a great deal as regards his choice at the outset. But having laid some sort of sound, if limited, knowledge with his one developer he may very properly consider the peculiarities and special points in favor of some of the other developers. For, in fact, every one of them possesses properties which may at times be found to give the picture-maker just the very effect or result he desires. The differences, though not always very marked, are none the less valuable, for we do not always want to be aiming at extreme effects.

Eikonogen has of late years been somewhat neglected. It is a fairly quick acting and reliable developer, giving good black colors.

It may be conveniently used as a one solution developer. Water, 10 oz.; soda sulphite, 1 oz.; eikonogen, 100 gr.; potass. carb., 160 gr.; potass. bromide, 5 gr.

Metol is a particularly useful agent when soft contrast pictures are required. When used diluted it gives cool grays, but if moderately strong good blacks are obtained by full development.

Metol is often used much stronger than is really necessary, and with no advantage accruing from the extra material.

A good standard formula is as follows: Water, 20 oz.; soda sulphite, 1 oz.; metol, 20 gr.; soda carbonate, 1 oz.; potass. bromide, 5 gr. Many workers prefer to omit the use of bromide altogether, except where the print is known to be over-exposed, or when extra contrasts are required. Metol brings out all parts of the image at about the same time.

Rodinal has the advantage of giving a gray-black picture in the early stages of development. One of the peculiar features about rodinal is that a strong solution gives more contrasts than a weak solution. Hence it is particularly useful for dealing with doubtful exposures.

Development should be commenced with a 1 in 100 solution, *i. e.*, five drops of rodinal for each ounce of water, and no bromide at all. In about a minute or so this brings out a grayish thin ghostly picture if the exposure is correct. In that case we may then add more rodinal to bring the proportion up to 1 in 50 water, and add three drops of a 10 per cent. solution of potass. bromide for each ounce of developer.

If, however, the picture shows signs of under-exposure then use rodinal 1 in 50, *i. e.*, 10 drops per ounce, but reduce the bromide solution to 1 drop per ounce developer.

In case of over-exposure bring the developer up to a 1 in 20 strength, *i. e.*, 25 drops per ounce, and add 10 drops (or minims) of the 10 per cent. bromide solution to each ounce of mixture.

Rodinal is somewhat like metol in that it brings out all parts of the picture at about the same time, and so gives us a soft picture in the early stages, but by continuing development contrast is obtained.

Ortol is a sort of chemical combination of metol and hydrokinone and it closely resembles the usual M.Q. mixtures.

The following one solution is very convenient: water, 20 oz.; soda sulphite, 1 oz.; soda carbonate, 1 oz.; ortol, 50 gr. A few drops, say from 1 to 10, of a 10 per cent. solution of potassium bromide per ounce is added according as the exposure is normal or full, and as soft or bright prints are required.

Metol-Quinol. These two agents possessing opposite qualities form an excellent blend for negatives of medium contrast, *i. e.*, such as give a good P.O.P. print. Water, 20 oz.; soda sulphite, 1 oz.; soda carbonate, 1 oz.; metol, 15 gr.; hydrokinone, 20 gr.; potass. bromide, 5 gr. For soft gray effects this may be diluted with an equal volume of water.

Hydroquinone (*Quinol*). This agent is particularly useful for giving bright prints from soft negatives. The shadows and dark parts come out in advance of the high lights; but if a suitable, somewhat soft negative, be employed and under-exposure be avoided, the light detail comes along in due time.

Water, 20 oz.; soda sulphite, 1 oz.; soda carbonate,. 2½ oz.; hydroquinone, 40 gr.; potass. bromide, 5 gr.

The temperature of the developing solution should not be below 60° F. Excess of bromide is to be avoided or green blacks and hard prints devoid of high light detail will result.

Amidol is characterized by remarkably steady action and gives good rich black pictures. Either of the two following formulæ may be used:

1. Water, 9 oz.; soda sulphite, 1 oz.; potass. bromide, 5 gr. This forms a stock solution which keeps in working order for a long time. When required for use add 3 grains of amidol to each ounce of fluid to be used.

2. Water, 9 oz.; soda sulphite, 1 oz.; potass. metabisulphite, 1 drm.; potass. bromide, 10 gr.; amidol, 25 gr. This will keep a few days, but it is best used within twenty-four hours of mixing.

For increasing contrasts in the case of weak and flat negatives add 1 gr. of citric acid to each ounce of developer just before use. Citrate of soda may be used in place of citric acid in this connection.

Warm Tones by Modified Development. The general principle is to give two, four, eight, etc., times normal exposure (*i. e.*, exposure for black tones). The normal developer is freely diluted with water and carbonate and bromide ammonia added in varying quantities. Development takes place much more slowly than usual.

Adurol may be quoted as a fairly typical example for this style of working. Two solutions are required, viz.:

(*a*) Water, 2 oz.; soda sulphite, 360 gr.; soda carbonate, 180 gr.; potassium bromide, 2 gr.; adurol, 30 gr.

(*b*) Water, 1 oz.; ammonium bromide, 50 gr.; ammonium carbonate, 50 gr.

Double the exposure required for black tones, *i. e.*, normal exposure. Take 1 oz. A., 10 oz. water, and 10 drops or minims B. This gives sepia black tones.

Exposure four times normal. Develop with 1 oz. A, 20 oz. water, 30 drops B. Brown tones.

Exposure ten times normal. Develop with 1 oz. A, 25 oz. water, 60 min. B. Warm brown tones.

Expose fifty times normal. Develop with 1 oz. A, 50 oz. water, 200 drops B. Red tones.

In all the above cases and generally with other developing agents it is not possible without experience to forecast the color the print will have when dry by seeing its color in the developing dish. The hypo bath produces some color changes calculated to alarm the inexperienced worker.

Metol-Quinol. Warm tones.

Expose four or five times normal. Develop with 1 oz. normal metol-quinol as previously given. Dilute with 3 oz. water. Add 60 min. of a 10 per cent. solution of ammonium carbonate and ammonium bromide solution (see under Adurol).

For red tones expose ten times normal. Develop with 1 oz. normal metol-quinol, plus 10 oz. water, plus 3 dr. of the 10 per cent. restrainer.—*Practical and Pictorial Photographer.*

PROFESSIONAL COLOR PHOTOGRAPHY. DOES IT PAY?

[The following article from the pen of Mr. William Gill, F.R.P.S., of Colchester, one of our English subscribers, appears in the *British Journal of Photography*, and is interesting as showing how the photographer can make use of the three-color process.—Ed. W. P. M.]

To put the matter in the form of a query, Is it worth while for a professional photographer with a general practice to take up three-color work; in other words, if he does, can he reasonably hope for a profitable return, either direct or indirect? To the question thus raised, it is impossible to reply either "Yes" or "No," for if ever circumstances altered cases, they do in this instance. What one man might consider a profitable return, another might not. Thus much depends upon the individual's aims or expectations. If he expects direct benefit in the shape of a large and healthy increase in his profits, and so in his banking account, all from making and selling lovely and more or less truthful pictures in color of ladies, flowers, fruit, etc. (and this, say, in a few short months), he will probably be sadly disappointed.

Under favorable circumstances, he may in the first year get back, in some such ways, the money he has expended in plates and films, but no return on his capital expenditure in screens, apparatus, or, perhaps, leisure.

On the other hand, he may, during that period, get no return worth naming, for anything like a thorough mastery of the principles and practice of three-color work involves a very considerable outlay in time and money before any results of commercial value can be obtained.

It is probably the necessary sacrifice of time in particular which seems to an ordinarily well-occupied photographer

the great stumbling-block. He sees, reasonably enough, that he can, by want of caution or forethought, sacrifice substance for shadow, or real gain for a doubtful one.

No less celebrated a business man and photographer than Falk soon discovered that to attempt photography in color in conjunction with ordinary studio work was impracticable.

The extra return in cash and business did not, in his opinion, compensate for the time and money expended, or for the disorganization of the ordinary routine. He saw also, and the case of the St. James's Studio seems to prove, that the time has not come, or methods are not yet adapted, for the profitable use of a studio for color work only.

Color Work in Professional Photography. Still, and on the other hand, we have to deal with the fact, for fact it probably is, that few of those who have taken up color work have regretted so doing, even in full view of all they have spent in patience and hard cash.

In view of what has been said about the little direct profit that may reasonably be looked for, and the risk of misspending valuable time, this statement may seem a little surprising, if not actually paradoxical.

It may, however, be thus sustained:

The contented experimentalist in question is probably a busy man, for it is an axiom that it is the busy man who makes time for any task he sets himself, and so it is to the busy man we go when we want a thing done, and well done.

He is probably also one who takes a keen interest in all the "developments" of his beloved art, and, perhaps, from artistic instinct, or training, is not wholly obscured by a constant dwelling in a world of black or brown and white, loves color, and longs to reproduce it.

This love for his art, and faith in its possibilities, leads him to use spare evenings for study, and rainy days or odd hours for practice. He is likely to be an expert carbon printer, or, fortunate being, has a "sub" who is, and whose help he can rely on at critical moments if he himself is called away. He probably knows something of time development, is a bit of a chemist, and a sound technician.

"*Many Happy Returns.*" As to aims, this man probably, from the temper in which he has taken the thing up, is not so concerned about the actual return in money, as in the sense of achievement. As he has formed no extravagant anticipations of gains, he is the less disappointed if they do not cover expenditure. But, indirectly, he has many happy returns, his attempts, though falling far short of his aims and intentions, give interest and pleasure to a wide circle of friends and customers. Some may even find places at leading exhibitions and gain kindly notices by the Press. Furthermore, the successful color photographer who is also a business man, can fairly turn his success to account in ways that may well be called direct.

Supposing that the experiments have been so far successful that he has two or three dozen presentable prints. He can then arrange them in his rooms and invite clients and others to inspect them. If little more than a pretext for an invitation to the studio, the exhibition will have its use; but, as a matter of fact, there are still a large number to whom color photography, except perhaps through a casual paragraph in a newspaper, is quite unknown, and who are proportionately gratified at seeing, for the first time, at least, what may honestly be called "a photograph in color."

When the show, as a private one, has done its work, the pictures will serve to brighten up the show-cases or windows, and so cater, to a very gratifying extent, to the love of novelty, which the successful business man, must to some extent consult and turn to useful account.

PHOTOGRAPHERS' ASSOCIATION OF WISCONSIN.

THE eleventh annual convention of the Photographers' Association of Wisconsin was held at Milwaukee, Wis., April 23, 24, and 25.

The first business session was called to order by President B. J. Brown, and Mayor Sherburn M. Becker extended a cordial welcome to the members of the association. The Mayor's address of welcome was responded to by President Brown.

The reports of the Secretary and Treasurer were read, and indicated a very satisfactory financial condition of the association, and on motion, duly seconded and carried, were accepted.

Mr. W. A. Pryor, First Vice-President, of La Crosse, read an excellent paper entitled "The Ethics of the Photographic Profession."

A vote of thanks was extended to Mr. Pryor and his paper recommended for publication in the photographic magazines.

Mr. Bish, of Chippewa Falls, gave a short talk and then read a paper which proved to be "A Plea for a Higher Standard of Education for Apprentices." Mr. Bish called attention to the great need for a better educational preparation than usually obtains among those who enter into the photographic profession, pointing out the fact that the price-cutter, schemer, trickster, and general all-round undesirable character in the profession usually comes from the ranks of those of the lower grades of educational and ethical standard. "Before entering into the legal, medical, or other of the learned professions," he said, "a young man or woman was required to be equipped with at least a fair educational preparation, and a photographer, before admitting to his studio as an apprentice any young man or girl, should acquaint himself as to his or her educational and ethical standard and fitness for the profession." "By guarding the profession by the admission of only a desirable class of apprentices," said he, "photographers who are now in business can do much to elevate the photographic profession and in a few years bring about a much more satisfactory condition in our business."

A vote of thanks was extended to Mr. Bish for his excellent paper, and the meeting was adjourned till 7.30 P.M., when a couple of hours were spent by Messrs. Collings and L. W. Brown, assisted by Mr. Wells, in a demonstration in bromide enlarging with the electric lamp. The attendance at this demonstration was good, and all were much interested in the methods shown and the ease with which enlargements could be made from their regular negatives and without very great expense.

APRIL 24.

At 9 A.M. President Brown called the morning session, the first business being the election of officers. The offices were filled as follows: President, W. A. Pryor, La Crosse; First Vice-President, W. J. Hillman, Richland Center; Second Vice-President, L. P. Clapp, Marinette; For Secretary, J. M. Bandtel, of Milwaukee, was re-elected; Treasurer, A. A. Bish, Chippewa Falls, re-elected.

It was decided to hold the 1908 convention at Milwaukee.

Mr. H. E. Smith spoke on "Man's Inhumanity to Man, by Some Photographers that I Have Met." The story told by Mr. Smith was one that came under his personal observation while calling on photographers in his regular territory, and showed the careless, thoughtless, and almost brutal manner in which an old veteran photographer had been treated by a couple of young

men whom he had befriended and helped to make a start in business. The speaker endeavored to show how many men in the profession forget those who had given them their start and had helped them over the rough places. It might be added, that many photographers who have become successful forget the organization that had helped them gain their reputation and that started them on the way to their high position in the profession.

Mr. H. A. Collings, in his talk to the members of the Association, laid special stress upon the importance of a photographer having a good standing and a favorable reputation in his community. "Do as other men in other professions and in other lines of business," said the speaker. "Let the people of your town know that you are there; that you amount to something. Be somebody; take an interest in the public affairs of your community; show that you are a live and energetic man in your town. It pays in dollars and cents."

Mr. J. F. Decker invited the members of the Association to view a beautiful collection of pictures by Rudolph Duhrkoop, of Hamburg, Germany, that were on exhibition at the studio of S. L. Stein, and a number of them availed themselves of this opportunity to see the work of a master in our profession.

The educational session was called to order by the President, who then introduced Mr. C. W. Neiswanger, of Muncie, Ind., a trustee of the Daguerre Memorial Institute and a Vice-President of the Indiana Association of Photographers. Mr. Neiswanger read a paper entitled, "The Toils of the Laborer and the Cunning of the Genius."

Mr. Neiswanger's paper created much interest, and he was voted the thanks of the Association for his address.

"The Successful Photographer," was the subject of a paper by Mr. W. J. Hillman, of Richland Center.

(The papers by Messrs. Bish and Hillman will appear elsewhere in this issue).

Mr. Geo. J. Parrot, of Fort Wayne, Ind., a trustee of the Daguerre Memorial Institute, led a very interesting discussion on the subject of "The Closing of the Studios on Sunday." Mr. Parrot's arguments in favor of the Sunday closing of the photographic studios were well and forcibly put, and indicated that he had given the subject much careful thought.

His talk brought out considerable discussion in which many of the members took part, and the subject grew rather warm, and it developed that there was considerable sentiment in favor of closing studios on Sunday. It was conceded, however, that drastic measures, brought about by the passing of Sunday laws, would be impractical and futile at this time, and that the question was one of economics, and that would, in time, be solved by education and public sentiment.

B. J. Brown read a paper in which he pointed out the objects and purposes of our organization—what it has accomplished and what it ought to accomplish. He advocated strongly the continued growth of the fraternal feeling among photographers and most urgently recommended the attendance at our conventions each year, and especially requested that each member bring a few specimens of his work to our next meeting.

The Secretary, who had been heard from occasionally, and several other times, spoke on the suject of "Home Portraiture," expressing the opinion that as photography grew older, the patrons of the photographer would require more of their portrait work done at their own homes, where they were more at ease and where more natural results could be obtained. "The baby," he said," can never be photographed in the studio (a place where it is a stranger, amid strange

surroundings) with the same naturalness and satisfaction that might be looked for in its own home, with its own familiar scenes. The aged very seldom care to visit a studio, generally found on the upper floors of buildings, but would feel more at home and would look more natural in their own favorite chairs in their own familiar environment." He called attention to a collection of home portraiture exhibited by Mr. Neiswanger, and suggested that some time be spent in a demonstration of this work. Mr. Neiswanger consented to give such a demonstration for the benefit of those who were interested.

April 25.

The morning was taken up with a demonstration in toning prints by Harry E. Smith, assisted by Messrs. Wendtz and Bouton.

Messrs. Collings and Brown demonstrated the toning of bromide enlargements by the re-developing process. The enlargements that had been made on Tuesday evening were made into beautiful sepias.

The afternoon session was called to order at 3 o'clock, by the President, and the first order of business was the report of the judges, which was as follows:

The "Werner Trophy," awarded to B. A. Rice, of Milwaukee. The "Rice Trophy," awarded to H. J. Leonard, of Racine. In class "A" the first award was to D. D. O'Brien, of Waukesha. The second award was to the Rembrandt Studio, of Oconto. In class "B" the first award was to J. H. Field, of Berlin, Wis. The second was to F. R. Poe, of Oconomowoc.

The awards were as follows: "Werner Trophy," a bronze Japanese vase. The "Rice Trophy," a large silver cup, and the awards in classes "A" and "B" were solid gold badges.

The picture selected for the Association salon was the "Cowboy," from the exhibit of B. A. Rice.

A collection of six landscapes exhibited by J. H. Field was designated as the best exhibit in the Convention, and was marked with a blue ribbon badge.

Messrs. C. W. Neiswanger, Geo. J. Parrot, and T. I. Moffett, acted as the judges.

Messrs. Neiswanger and Parrot, as trustees of the Daguerre Memorial Institute, selected four pictures from the exhibits of the Convention to be hung in the Institute as a "loan exhibit," and these will be entered in the competition for the D.M.I. diamond badge.

The pictures selected were as follows: "The Cowboy," by B. A. Rice; "Picking Flowers," by J. H. Field; "Lady Violinist," by H. J. Leonard; the picture of a boy playing with a toy engine, by Eb. Harwood.

A vote of thanks was extended to the judges, for their services, and to the trustees of the D.M.I. for courtesies shown to the Association.

A telegram from G. Gennert, of Chicago, offering a trophy cup to our Association for next year, was read and ordered placed on file.

Mr. J. C. Howarth gave a short talk on advertising.

The thanks of the Association were tendered to the people of Milwaukee for their hospitality; to the press for the reports of the convention; to the members of the Ladies' Entertainment Committee for the care of the visiting ladies and for the entertainment on Wednesday evening; to the management of the Republican Hotel for the use of their banquet hall for entertainment purposes; and to the officers of the Asociation for their successful management of the Association's interests.

President Brown extended his thanks to the officers and to the ladies.

J. M. Bandtel,
Secretary

THE SUCCESSFUL PHOTOGRAPHER.*

Of all professions, it seems to me that the photographer, to be successful, must be the most versatile, capable of turning from one thing to another with ease; keeping cool and calm under all conditions and circumstances. He must have full and complete control, and be master of the situation. First, he must be a good business man to succeed, for what business can be prosperous unless conducted on business principles and with business methods. He may have all other qualifications for a good photographer, yet without business methods and tact he can not be altogether successful, though he may not be an utter failure. He should have a set of books, and keep a strict account of all receipts and disbursements, and be able to know whether he is a success financially or not; for you may be sure that if there is failure here, there is failure throughout, for the success of all departments of the business are largely dependent on finances and financial success. He should be neat and clean and fairly well dressed, as personal appearances have much to do with success. He should meet his customers in an agreeable and affable manner, showing an interest in them and a desire to please, which will place them at their ease and in a proper condition for a pleasing picture. First impressions tell. With care and tact, a valuable customer may be gained right here; while carelessness and inattention may drive him or her away forever.

Study human nature; learn to read each face as it comes in, and with a reasonable amount of experience you will learn to handle each individual subject that presents itself. One person is jolly and delights in a joke; hand him out one, if you have them in stock (and you should have), and hear him laugh. Now, that he is in good humor, work him around to the picture subject and you are almost sure to get a good expression and a good order. The next person may be just the opposite in his nature and make-up. He is dignified and solemn—he never could laugh—never could see the point of a joke, everything is going to the "everlasting bow-wows" with him. Do no joking, if you would please this patron. Be dignified; show your styles of work in a dignified manner; give your prices, if requested, and by treating him as an important person you may make a good, regular patron.

Use judgment and care along these lines and you should succeed. Be very careful in making your sittings. See to it that you have the very best that you can produce in the way of negatives. Do not let a plate or two stand in the way of your success, but know yourself that you have the very best negative that can be made before the customer leaves the studio; for with good negatives and proper care in the printing and finishing you are sure to turn out a pleasing portrait. I believe that it pays to put in honest and conscientious work all along the line. Our customers will, in time, recognize our efforts to please them, and knowing our integrity, will be more inclined to give us their patronage, rather than to pass it to those who are known to be careless and indifferent as to the quality of their work.

Let us be clean and painstaking in finishing our work, remembering that a clean, well-finished picture is a credit to its maker and a travelling advertisement for more patronage; while a dirty, slovenly piece of work is an abomina-

* A paper read by W. J. Hillman, Richland Center, Wis., before the convention of the Photographers' Association of Wisconsin, April 24, 1907.

tion, unworthy of the efforts of the producer, and while also a travelling advertisement, it is one that keeps away trade rather than that it should bring business to the one who is known to have sent it on its rounds.

Let your pictures have a clean, crisp appearance as they go into the hands of your patrons, and by placing a small envelope of perfumed sachet powder within the package, with your advertisement neatly printed thereon, thanking the patron for the favor of her order, it will give a dainty effect and prove very pleasing to the customer.

The confidence of the public is your "winning card," and is worth much to you in your business. Do all you can to gain and retain this confidence, for it means success. Finish your pictures promptly and on time, according to agreement. Do not agree to have pictures done at a certain time, and then fail to deliver them (making excuses that the patron will consider only as such), for how can you keep the confidence of your patrons while disappointing them; and what will they think of you as a business man if you treat them in this manner? Again, how humiliating to you, if you have to make all kinds of excuses for not finishing their work when promised!

Soon you have lost your reputation for reliability and promptness, and your competitor over the way has gained a customer through your negligence. Be prompt, if you would succeed. Let it be understood from the start that you are a man among men, and not a "cheap John." Let the people understand that you are giving the very best work at reasonable prices, and that your products are fully worth the price that you ask for them; that you are not in business for your health, or in competition with the cheapest man in the country, but to live as the people live about you, and to gain a competency for old age. Charge prices that will pay all your expenses and keep you honest, and your name and credit above reproach, leaving a goodly amount for a bank account. Less than this means failure, and in the end, with credit gone, you are classed with the disreputables and the unsuccessfuls.

Study the cost of your products and see if they can be produced for the prices that you are asking. Remember, you are to be honest with yourself and those who are dependent upon you, as well as with the persons on the other side of the transaction. Many photographers figure only the cost of plates, paper, cards, and chemicals, and charge accordingly, thinking that all receipts above these expenditures are "profit" and that their "profits" are large. If they would add the interest on money invested (which is a perfectly legitimate item), the rent of their studios, the cost of fuel, taxes, light,insurance, help (if any is employed), repairs to instruments, furniture, etc., and occasionally the addition of a new article of furniture or a new and improved instrument; in fact, all necessary expenses connected with the conducting of the business, and not forgetting a reasonable salary for the proprietor (whose time, labor, skill, and energy ought to be worth as much as those of men engaged in other professions), they might discover that business was being done at a loss, and unless prices were raised to meet the discrepancy, they must close up and retire in a short time.

Advertise, but do it judiciously. You can invest much money in advertising and, if not careful, receive very little benefit therefrom. There are many ways of advertising. Some are good, while others are not to be thought of.

For instance, it has been our experience that large newspaper advertisements are not profitable for the photographer (as they do not bring in sufficient returns for the money invested therein), while

a small local, now and then, may be quite beneficial. We think that "fence advertising" is good (in some localities), as we placed some of this kind some fifteen years ago and it is still bringing in trade from those who travel to the town in which the advertiser is located. We are opposed to all kinds of "fake advertising," prize-giving or "free gift" schemes, as they are costly and always harmful; giving the public the impression of cheapness and lack of quality in your work. Hold to this last plan of advertising for any length of time and your business will soon stand in about the same relation to a first-class studio as does the dime museum to grand opera. The best advertising that you can possibly have is a pleased customer and the good work that you send from your studio. This kind of advertising is being renewed every day, is continuous and doing good in your behalf at all times, costs only a little careful work on your part and is very satisfactory, not only to the patron but also to yourself. Do not depend on all sorts of schemes to attract attention to your studio, for tricks eventually hurt the trickster.

Do an honest, legitimate business, and while you may not rise "by leaps and bounds," your prosperity will be lasting.

Finally, I would advise you to take as many as possible of the good photographic magazines and study the method of the best workers. Keep abreast of the times, and endeavor to go a little ahead of them. Work; plan; attend the conventions of the photographic associations, and you can learn much by coming in contact with your co-workers, and with a free exchange of ideas benefit both yourself and those whom you meet at these gatherings.

You will go home with new ideas, new energies, and fresh ambitions for the improvement of your work and business. This means new customers, more patronage, more big round dollars, and greater satisfaction with yourself and your profession.

A PLEA FOR A HIGHER STANDARD OF EDUCATION OF APPRENTICES.*

BY A. A. BISH.

A BIG brawny boy from the farm, or from anywhere else for that matter, could hardly expect to be admitted to an attorney's office or to a law school, to learn the science of law as laid down by Blackstone and others, unless he had, to begin with, at least a fair common school education, on which to build his superstructure. He would be told very plainly that he must be proficient in the three "R's," to say the least, before he could hope to make any headway in the mastering of a course of study that would fit him for a profession, be it law, medicine, dentistry, or what not. And other things being equal, the better general education he has on which to draw, the better professional man he will make of himself. His muscle, or main strength and awkwardness, might give him a standing among his fellows as an arbiter of petty disputes, but this would avail him nothing in a court of law.

True, we may have an educated fool, but I contend that when this seeming paradox does occur we need not lay the blame at the door of education, but rather at the feet of the individual, where it belongs. Food is a good thing, and necessary too, but should be taken with some discretion, otherwise it may do us harm, and in the absence of a proper education in the case of the abovementioned fool we might have a far more dangerous person to society at large and to his fellow workers, were he simply ignorant and vicious.

What is true of the professions is true of the crafts and trades; they will be rated, more or less correctly, by a scrutinizing public, by the manly, straightforward course pursued by the members of that craft or profession or by the lack of it. They will be weighed in the balance which places dignity, honesty, and a broad-minded view of life

* A paper read before the Photographers' Association of Wisconsin.

in general, over against undignified conduct, dishonest methods in business, and a narrow and selfish aspect of things.

Your standing and my standing in our chosen field today, my friends, is determined fully as much by what we are as by what we can do. The artist, who lands in your town, armed with a cut price and a glib tongue, and who makes exposures on the slide of his plate-holder for two weeks, collecting fifty cents from each victim, and then suddenly decides to emigrate "out west," or elsewhere (possibly only to the next town), leaves behind him an aroma extremely distasteful, and on which legitimate photographers of that town will have to breakfast, dine, and sup for many moons.

Is it the educated, broad-minded, honest professional magazine reader, the convention-going man, that creates this havoc, like a "bull in a china shop," in our midst today? I say, NO! It is the man with a low capacity for ethics. It is the man of small mental and educational qualifications, the selfish man; the man who by right or by law should not be allowed to pursue his nefarious quackery.

But, you ask, how is a better state of affairs to be brought about?

"We are all well aware of the many evils, and this one in particular, but how are we to better conditions?" My friends, when you joined this association you accepted the constitution and by-laws of this organization, of which Art. I, Sec. 3, says: "The object of this association is to discourage anything which has a tendency to stint or hamper the art's progress," and continuing, Sec. 4 says: "to establish the relations between members of the profession and their patrons upon just, pleasant, and business principles, which shall promote the public welfare and be of mutual advantage to the photographer and patron." Now, we would not be true to our obligation or to ourselves, or to our profession if we did not in every way and manner try to fulfil the above terms of our contract. Furthermore, I believe that most of us have, and that the influence of these associations throughout our country has been and is doing a vast amount of good; but are we all doing all we can, in every way, to still further the good work done? I will not answer this question, but rather leave it with you, while I call your attention for a few moments to one phase of this subject that I have thought of somewhat, more or less, for the past year, and that is in regard to the educational qualifications of the boys and girls that we admit into our studios as apprentices. I believe that if we photographers who are now in business in the State of Wisconsin made it a hard and fast rule to accept no one as an apprentice unless he was equipped with a common school or, better yet, with a high school education, that in five years we would see a marked improvement in the conditions of things relating to our profession in our State.

And if the other State associations took up this matter, and the several schools of photography insisted on the same requisites before admittance to their class rooms can be gained by their intended students, we will have made a long stride in the direction of ultimate betterment of the photographic profession.

Our business is clean and honorable from every standpoint and we should make it a point to encourage only those whom we feel sure will bring still more respect and still better business conditions about when we step down and out.

I, for one, until convinced of my error, will follow this rule. At the same time we will surround the apprentice with good professional magazines and will encourage him to read and study them, and will further use every effort to inculcate good moral, ethical ideas in the mind of the future member of our profession. I would earnestly ask every member of our association, yes, every member of the profession, to adopt similar rules to the end that every addition to the photographic profession may be a faithful man, and when he takes his leave to engage for himself in his chosen life work, as does the physician when he leaves a reputable college, wherever he goes he will become the very best competition that one could possibly have.

Then, too, we may some day have the satisfaction of receiving his thanks for having thrice armed him for his battle in life, for we not only showed him the artistic and mechanical side, but at the same time left an indelible impress of the ethical as well.

The artist of the brush does not look on the wide monotonous plain for a subject for his canvas, nor the poet for a theme for his fancy, but only have they to turn to the things above mentioned, diversified nature, with which we photographers, especially those from the country, are daily surrounded, to find much with which to delight his brush and pencil or call forth his song; and we photographers need this stirring of the imagination as well as our brother artist or the poet. Without it we are as clods of the valley. Let us emulate the work of our brother, J. H. Field, of whom we of Wisconsin ought to be and are justly proud. We ought to get out of our dusty prisons more than we do. Get out and become acquainted with "dame nature," and feel that you are a man among men. Do not spend so much time in your printing room on the roof, peering through a crack, trying to count the printing frames that your competitor has in his window across the way (sometimes without sensitive paper in them).

Let us grow mentally as well as financially. We cannot be artists unless we first become men. To be "up with the times" will hardly do in this age; we must be ahead of the times, we must anticipate. In our conventions we should assist our officers. They cannot make a convention alone and unaided. "Do not knock; lay down the hammer and work," is a good slogan.

The present should not engross all our attention exclusively. As we are indebted to the past, so must the future workers look back to us and be indebted to us. With this in mind, I most earnestly call attention to the fact that we ought to demand certain educational and ethical qualifications in those who seek admittance to our ranks.

TRADE NOTES.

THE following letter from Mr. C. V. Cooper, Manager of the Castilloa Rubber Plantation Co., of Portland, Oregon, speaks for itself:

PORTLAND, OREGON, March 18, 1907.
HAMMER DRY PLATE COMPANY, St. Louis, Mo.

GENTLEMEN: Referring to your letter of December 5, in reference to using your plates in tropical Mexico, I beg to say that I returned on March 1, from an extended trip in that country, taking with me ten dozen of your 5 x 7 extra-fast plates. With the exception of four or five spoiled plates (due to my own carelessness), every exposure I made in that section resulted in beautiful negatives. This is the first time I have had such a result in the many trips I have made in that country. The plates were packed in paraffine paper both before and after exposure, brought home and developed here. This is for your information.

Yours very truly,
C. V. COOPER.

THE BAUSCH & LOMB-ZEISS PORTRAIT UNAR has attained a commanding position in the photographic world and its popularity increases as it becomes more widely known. Its fine optical corrections, together with its adjustable systems for securing diffusion, make it a wonderful all-around lens, suitable for busts, three-quarter and full figures, and also for groups. Nothing better could be wished for by the photographer who wants a single lens for all his work.

Another lens of remarkable range is the Bausch & Lomb-Zeiss Convertible Protar, Series VIIa, which might well be used by photographers who do outdoor work and home portraiture. The single lenses of this convertible series are adapted for instantaneous outdoor work under favorable light conditions, for landscapes, groups, and large heads, while the doublet is adapted for groups and architectural work.

As an example of what this lens will do in the hands of a photographer we cite the fact that it was used by W. S. Lively in making the two portraits entitled "Son of the Mountains" and "Study of an Old Man." The former won the Grand Prize in Open to World Class, April 10, 1907, of the Tri-State Association of Photographers and the Grand Prize in Open to World Class, Chicago, May 9, 1907. The latter (reproduced in our October, 1906, issue) was selected to hang in the Daguerre Memorial Building at Winona Lake, Indiana.

THE INGENTO COLOR-FILTER, manufactured by Burke & James, from the formula of Mr. R James Wallace, is we think the last word in correct color-screens. Manufactured with the greatest nicety and adjusted to 0.0001 part of a gram of dye, it is the only color-filter that is absolutely corrected to give full color values to all subjects under normal conditions. From our tests of the Ingento filter we find that it is exceptionally speedy, requiring only eight times the ordinary exposure. Its action is strongest in the yellows and greens, being dimmed down in the blues and violets and entirely cut off in the ultra-violet. It is a filter that works equally well with the different brands of plates, and we have obtained equally good results of the same subject on orthochromatic films and ordinary glass plates. The prices range from $1.50 to $6.00 according to size. A handy little book with interesting test-charts and extracts from an able lecture by Mr. R. James Wallace on "The Perfect Color Filter," with full description of the Ingento filter, has been published by Burke & James and can be obtained from your dealer or the publishers free of charge.

NOTWITHSTANDING the unusually cold spring the signs are that the summer will be a hot one. The Seed Tropical Plate, standing 90 degrees without frilling, is a good plate to know about. Its non-frilling qualities are not its only good points—it has all the other good points that go to make the Seed 26-X an international favorite. If the weather gets too warm for your regular plate try the Seed Tropical.

WE are glad to announce that Taylor, Taylor & Hobson Ltd., manufacturers of the well-known Cooke anastigmats, have secured the American agency for the famous Dallmeyer Portrait Lenses. They will carry a full line of this lens and are now prepared to take care of any inquiries and fill all orders.

FOR cloud effects without Ray Filter use Ansco Film, is an instruction advertised by the Anthony & Scovill Co., who have been receiving some very strong endorsements of their improved film. They have also put on the market a new grade of Cyko paper—Professional Cyko—giving a great range of tones from high light to shadow and specially recommended for contrasty negatives.

EDITOR'S TABLE.

INTERNATIONAL PHOTOGRAPHIC EXHIBITION AT DRESDEN, GERMANY, 1909. Preparations are going forward to make this one of the greatest photographic events yet held. According to plans now being made the Exhibition will rest on the broadest basis; it will offer a comprehensive representation of photography in all its being and nature, in its many-sided results, in all its connections with economic and cultured life. Through its thoroughly international character—all nations and countries are to be invited to take part on the ground of absolutely equal privileges—it will be a World Exhibition in the truest sense of the word. The large and beautiful Exhibition Palace of Dresden with its grounds offers room and surface enough to accommodate the most comprehensive

requirements, and Dresden itself, by its central position, the charm of its scenery, its pleasant life, and more particularly as the centre of photographic industry in Germany, is suited, as is no other place, to such an Exhibition. The program of the Exhibition is organized in such a way that each important branch of photography is independently represented with full specification. Every exhibited object, whether picture or industrial production, is not only to appear as an article of exhibition, but is also to be shown in its relation to the whole of photography as well as to the relative branch of culture which it serves. In this manner the Exhibition will be extremely stimulative and instructive to the widest circles and will at the same time be a documentary event for photography itself.

It is not always that the prophet is without honor in his own country. After a three-year's absence from his native city of Boston, Mr. Coburn has been honored by having his collection of photographs shown in the St. Botolph Club, Boston's most exclusive art club and one of the best known art centres in the country.

From the Cincinnati College of Music we recently received an invitation to a vocal recital, the occasion being the first public appearance of Miss Orina Brenner, who has been studying singing under Signor Mattioli. Many of our readers who attended the last few National Conventions will remember Orina and wish her success in her musical career.

The following clipping details the growing demand for the better class of post-cards—photographic presumably. We wonder if the photographer makes the most of his opportunity along this line. It would be interesting to know how the revenues of the postoffice and the volume of the mail have been increased by the development of the souvenir postal-card business. There is little doubt that large figures would be needed. It is quite likely, too, that the decision of the post-office department to issue stamp books containing twenty-four one-cent stamps, these to retail for a quarter, is connected with the increased demand for stamps of this denomination for use on the postal cards. Post cards will be popular for a long time, notably in connection with the better class of cards, which show pictures of famous places, persons, or scenes. Many travelers have taken pleasure in sending a word of greeting to distant friends through the medium of a postal card who would not attempt the more tedious task of writing letters to all whom they might wish to remember.

Those of our readers who were interested in the account of *Ozobrome* given in our last issue will be glad to learn that the materials needed will very shortly be placed on sale in this country, thus saving considerable time and expense in not having to send to England for the necessary supplies.

After many delays, Professor Beck's great work, *Art Principles in Portrait Photography*, has at last appeared. The book was received too late to receive anything but a very hasty notice. It will be reviewed at length in our next issue.

The National Photographic Library, founded in Washington, D. C., in 1906, is surely worthy the support of a Carnegie or other multimillionaire with a desire to advance learning. The purpose of the Library is to found upon broad educational lines a great national repository of photographic illustrations and distributing centre for the same, that will occupy in its special field a position analogous to that of the large reference and consulting libraries in the domain of literature.

For the first time in the history of educational work the effort is made to secure completeness in every branch of it, from a single item to an entire subject, with the most perfect and permanent photographic illustrations that can be made, with the necessary data printed on the reverse side of each photograph to render it most useful for instruction. It is intended to make it possible for one to take from the book shelves of our schools, libraries and other public institutions a volume of photographs on any subject that can be illustrated, and to have before him a brief monograph on it by a specialist, a bibliography of important works thereon, and the field traversed systematically illustrated by original photographs. In this busy age both the student and the man of affairs need the help which the pen and camera combined can give them.

We trust that the necessary funds for such an undertaking willl be forthcoming and that the National Photographic Library may be the beginning of a much more widespread application of photography to the work of recording and teaching, and gradually take its place in our public libraries with the type-printed books of reference.

Editor, Wilson's Photographic Magazine.

Dear Sir: In your May issue you published a letter by Sidney Allan in which he claims the authorship of the article in the January number of the *American Amateur Photographer* under my name. Allow me to explain that Sidney Allan did furnish me with some data for the article, and for which he was fully paid at the time. What he did furnish had to be re-edited, and represented only a small portion of the work. As the article was mine originally, and fully three-fourths of the work, I felt justified in shouldering the responsibility when it was published.

I request that you give space to the above letter of explanation.

Yours truly,

J. P. Chalmers.

Have you made your pictures for the national convention? If not why not make them now!

By W. N. Brenner, Cincinnati, O.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV JULY, 1907 No. 607

THE CONVENTION PICTURE.

BY THE EDITOR.

MANY of our readers will be thinking of the pictures they are going to send to the National Convention. It is an important question. The photographer is going to place himself on record. Not only does he seek to have his picture awarded Salon honors; he is going to hang his work alongside that of his brother photographer—maybe his competitor from his home city. It is, therefore, imperative that he should do justice to himself and honor to his craft by exhibiting the very best work that he is capable of producing.

Judging by the exhibits usually seen at Conventions the great need of the present-day photographer is more concentration and even more elimination. Too many good pictures are spoiled by too much detail—detail in the wrong place. We are not advocating fuzzy and indistinct pictures, but pictures in which the vital interest is not divided between the subject and the accessory.

Accessories — the picture hat, the child's doll, the high-backed chair, the elaborate background—are all more or less necessary. The great mistake is made in giving them equal prominence with the principal subject—and portraiture can have only one point of interest. Whatever is added in the nature of an accessory must be subdued and relegated to a secondary position. Professor Beck in his book *Art Principles in Portrait Photography*, speaking of the power and force of lines, remarks: "As in a monarchy there is always a leader in the person of a king or emperor; in a republic, a president; in the army, a general; as wherever organization exists there is a head or directing element, so in a picture, where of necessity many lines are used, there is a main or leading line, followed by a secondary, then a third, and so on."

After the photographer has made a good negative he often misses the opportunity to make a good picture by being afraid of using the pruning knife and eliminating some of the detail that usually overcowds the average negative. A good negative is often only the beginning of a good picture. Much remains to be done in the suppression of meaningless detail and the accentuation of the principal object. Take care that lines lead into the picture and not out of it. Avoid a too-literal rendering of the subject and endeavor to soften the outlines as much as possible.

During the past winter one of the

leading New York Sunday papers issued a very elaborate picture supplement reproducing in the same issue some of the masterpieces from the Metropolitan Museum of Art, and portraits of leading society women, opera stars, and actresses by our best photographers. It did not require a very highly-trained, artistic nature to understand why portraits by the "Old Masters" commanded fabulous prices, while the photographic portrait is bought by the dozen at a price too small to mention. They were both reproduced in halftone so that the "Old Masters" had not the advantage of color which the originals possess. They had, however, a compelling interest; the principal object held your attention, the soft outlines fading away into a still softer background, and the whole picture having an indescribably charming and pleasing effect.

To go on with the comparison—though comparison is hardly the word—the photographic portraits were, to use a Bernard Shawism, photographic; the outlines hard and not always graceful, the non-existence of a proper relationship between subject and background; the equal prominence given to the sitters' faces and accessories not even in the same plane, was very evident.

In conclusion, we again quote from Professor Beck's book, and would emphasize his statement that "the over-ornamented chair, stucco relief-work, simple or strongly designed draperies, are discovered to be obstacles, because they enter into comeptition with the head or figure in seeking our attention. In studio language we refer to them as loud backgrounds, and in the use of the term we give evidence of their harmful nature, for a background (or accessory) should recede, produce quiet, and allow prominence to a main interest.

ART IN PHOTOGRAPHY.

ART in photography means many things to many people. It is a very broad term and, like charity, it often covers a multitude of sins. Mr. Arthur Dow, the well-known art teacher and writer, offers the following valuable suggestions on the subject in the "foreword" to the catalogue of the Wyoming Valley Camera Club's Sixth Annual Exhibition recently held in Wilkesbarre, Pa.:

"A photograph which is *merely a record of fact* is in no sense a work of art. It has, if accurate, a scientific, historic value but not an artistic value. The *art* lies in fine relations of line and beauty of tone—or beauty of proportion and beauty of massing. And these qualities must be deliberately planned by the author.

"*Subject.* Almost anything will be interesting if expressed in art form, *i. e.*, in terms of beautiful *line* and dark-and-light. Success in choice of subject depends upon seeing the possibilities of harmony in these terms.

"*Composition.* First, choice of a size and proportion to fit the subject. Then so arranging the subject within the space that there is a single interest. Centre the attention upon the point of interest; avoid confusion of interests. There should be variety and contrast, but the whole should give one simple, clear impression. The lighting involves an appreciation of beauty of dark and light massing. I should recommend a study of the charcoal drawings of William M. Hunt, the works of great etchers, Rembrandt, and Japanese prints.

"These are only suggestions—to enter into a discussion of methods of study would be out of place here."

THE NATIONAL CONVENTION.

THE time for the National Convention is approaching very rapidly, and we would urge all photographers who have not yet decided to attend to make up their minds at once and arrange to be present.

The city of Dayton offers many attractions and has the reputation of being the cleanest and coolest city in the Middle West. The Steele Educational Building, where the Convention will be held, is an ideal building for the purpose, offering not only a spacious and cool auditorium for the meetings, but an abundance of large, light, and cool rooms for the art display and for the use of the dealers and manufacturers.

The Committee has been fortunate in securing Professor Beck, author of *Art Principles in Portrait Photography*. Mr. Beck will illustrate his talk with drawings which will add materially to the usefulness of the lecture. This talk on the art side of photography will alone repay you for your attendance at this convention.

On the social side of the convention, some form of entertainment has been planned for each evening and a thoroughly enjoyable time is promised.

The Executive Board will repeat the "Salon" feature of last year's convention and will select twenty-five portraits—regular studio work—to receive Salon honors. The makers will be awarded handsome certificates for display purposes. This outward and visible seal of approval from the National Association is a good advertisement when hung in your reception room and will add to your prestige. It is an honor well worth trying for.

The Manufacturers and Dealers' Section this year promises to be a very representative one. The added feature of a hundred dollar gold prize for the most useful invention of the year should create a greater interest in this department.

Dayton is well supplied with good hotels—the accommodations are ample and the rates reasonable. Photographers who expect to locate at the official headquarters, The Algonquin, had better make their reservations at an early date.

Make up your mind to attend the Dayton Convention and make your plans now. All the indications point to a highly successful convention and you really cannot afford to miss it. The place is Dayton, Ohio, and the time August 6th to 9th.

NATIONAL CONVENTION NOTES.

BY C. L. LEWIS,
First Vice-President

IT looks as if this year's National Convention was going to be a particularly interesting one. There is the National Academy subject, a mammoth subject, in the hands of a committee of like proportions appointed by ex-President Hearn, comprising many of the leading photographers of the country. Something can reasonably be expected of them. Mr. Hearn is fathering this object; he will be on the ground, and there is no danger of its being lost sight of. By the references made in some of the journals to this National Academy project,

many have been led to think that the idea has been dropped for the present, but those who think so know nothing of the bulldog tenacity of Charlie Hearn. A man of his determination, allied with so able a man as Mr. Cummings, is not likely to let up until the goal is reached.

Then we have this ever-interesting though perplexing subject of prizes or no prizes, for the future conduct of our Convention exhibits. This is coming up to be settled by the Convention, that the future Executive Boards will not have to wrestle with the subject at their mid-winter meetings. A committee of capable men was appointed at the Niagara Falls Convention to present resolutions at Dayton, and so get the matter into shape to be acted upon. This subject will doubtless call out much interesting discussion. Whether the exhibits during the past few years proved better when prizes were offered, or when they were not, will, of course, be one of the strong points. This year being a no-prize policy, but the second of the Salon, much will depend on the showing of work this time.

Then there is the $100 to be given to the manufacturer or stockdealer exhibiting the best apparatus, formula, or device, and $50 to the originator of it. This feature proved one of the most attractive at the New York State Convention and is sure to bring out a lot of good things. Only one man gets the money, but each member has the opportunity of grabbing every good thing offered in competition, and of the lot he may find something that will be worth more to him in his everyday work than the money paid to the successful competitor.

I have heard there is to be a daily newspaper published "on the grounds," with all the news right up to the second. There will be no danger of missing anything, for the paper will keep you "wise" as to what is going on and where; but no trouble about the where, as it is all in one building—art exhibit, stock exhibits, entertainment, meetings, everything under one roof, and your membership button admits you to the whole show.

The Entertainment Committee is preparing to outdo all previous efforts in the way of quality of entertainment. Some very clever entertainers have been secured.

Then there is Dayton! Do you know Dayton? Well, it is called the Queen City of the West, and rightly so. She is a nice, clean queen and very fair to look upon. Her house is always swept and garnished and her board spread with the best the market affords. She has within her walls the home of the National Cash Register, the model industrial institution of the world.

The city stands upon a plain a thousand feet above the sea-level, and its population of 150,000 is likewise high-minded. Dayton boasts of the finest Union Station in the State, in which run eight railroads with one hundred and ten trains daily. These, with thirteen interurban lines, carry in and out of Dayton upward of thirty thousand people daily. With over a hundred churches, five colleges, twenty-five schools, five libraries, and a score of up-to-date hotels, Dayton is prepared to care for her guests both bodily, mentally, and spiritually.

The photographers of Dayton have a strong and flourishing local organization and are preparing to do their best to give the members of the P. A. of A. a royal welcome.

To Dull Bright Surfaces of Machinery, etc.—Make thin cream of white lead and turpentine, add lampblack to make a gray tint, and then one-sixth the bulk of gold size. Paint over, and remove afterwards with "cotton waste" damped with benzine or turpentine.

PROPOSED MONUMENT TO THE MEMORY OF THE LATE JAMES INGLIS.

PIRIE MACDONALD, at the end of the year 1896, suggested to me that I should endeavor to get James Inglis to write a series of articles on lighting for the benefit of the professional photographers of this continent. I placed the matter before Mr. Inglis and he at once gladly assented, because he felt that it was the duty of every man in any profession to do the best he could to help those who were earning their living in it. A great many people never realize what they owe to the profession that has given them an opportunity to earn a living, but James Inglis realized this to the full and he wrote his articles and presented them to the fraternity without price; nay more, when he found they were creating considerable stir he very gladly, at his own expense, went to many conventions and demonstrated his ideas.

James Inglis was undoubtedly the father of the great pictorial movement that influences the professional photographers of this country today, and this art movement is the grand old man's greatest monument, and he personally, were he alive, would care for no other recognition.

Pirie MacDonald and I were discussing this idea a few weeks ago when he remarked that, though this was undoubtedly true, there was another side, and he felt that the photographers of this country were under obligation to the memory of James Inglis, and that since it was at his suggestion the articles were written he felt it was the proper thing for him to make another, and it was this, that since I had been so closely associated with Mr. Inglis in the propaganda of artistic lighting it was but fitting that I should take charge of a movement to erect a suitable memorial over his grave. He proposed that I give an opportunity for every professional photographer in this country who felt that he had been benefited by the teachings of Mr. Inglis to contribute the sum of $1 toward a monument, and that no larger sum be accepted from anybody, and he forthwith placed in my hands the first contribution. I need scarcely say that I gladly undertook the duty thus offered me.

The first step was to secure the consent of Mrs. Inglis and the children, which I am glad to say was very willingly granted.

It is not intended either by Mr. MacDonald or myself that an elaborate monument should be erected, for we feel that a simple stone or tablet bearing a few well-chosen words will be sufficient. It will be the sentiment behind the act that will count, not the act itself. We consider that from one to two hundred dollars will be enough, and we invite prompt contributions of $1 each.

All contributions should be forwarded to me at my home address, Box 82, Glencoe, Illinois.

F. DUNDAS TODD.

We fully endorse all Mr. Todd has to say and we are sure many of our readers will be glad to contribute the modest sum asked for so worthy an object.—ED. W. P. M.

A Cold Negative Varnish.—Manilla copal, ¾ oz.; epichlorhydrin, 2½ oz. Digest in a water bath until dissolved, then add absolute alcohol, 3½ oz. This may be further diluted with a mixture of epichlorhydrin, 1 part; absolute alcohol, 5 parts. May be applied hot or cold, gives very hard, clear film, dries quickly, and will easily take retouching.

THE FOCAL-PLANE SHUTTER FOR STUDIO WORK.

BY C. H. CLAUDY.

In this age of specialization it may well be possible that there are professional makers of portraits who are not familiar with the operation and advantages of the focal-plane shutter. Yet this piece of apparatus has things to recommend it for studio work which make it well worth the attention of any gallery pretending to do fast work. In order to write of the subject so that it will be understandable, it is necessary to beg indulgence for a few words of description of the instrument, what it is, and how it works.

The focal-plane shutter is a device working in the focal plane of the lens, and admitting light from the lens to the plate. As a matter of fact it does not work exactly in the focal plane, as that is occupied by the plate itself, but closely in front of it. It consists of a curtain of opaque cloth in which is either a slit running across the width of the curtain—an adjustable slit—or a series of slits of different sizes, any one of which may be used at will without using the others. In making the exposure the curtain is wound up until it covers the plate; pressing the button or bulb releases the curtain which travels downward, the slit travelling from top to bottom across the plate and allowing the light from the open lens to impress different sections of the plate successively. This simple apparatus comprises the focal-plane shutter.

Obviously it is unsuited for many varieties of work. If it is possible to have but one shutter in a studio it should not be a focal-plane shutter; but, on the other hand, it will do things that no other shutter can do. In certain circumstances it will add an hour at each end of the working day, and it will save its cost in plates in a few months if there is much work to be done which requires elimination of movement, as in child or animal photography, the making of large groups of people in fancy dress, or any subject where slight and unconscious movement may ruin the plate.

The reasons for its capabilities in this direction are found in the following fact and its corollary: The focal-plane shutter admits more light, speed for speed, than the ordinary blind shutter; or the focal-plane shutter can work faster than the ordinary blind shutter admitting the same amount of light to the plate. These facts are true only when exposures ranging on the instantaneous are considered. They have no bearing on time exposures at all.

The demonstration is logical as well as practical. Put briefly, and as simply as possible, it is as follows: The blind shutter has to open to admit light and close to shut it off; these two actions, of opening and closing, consume a certain amount of time; this amount of time is a certain proportion of the total time of exposure; that proportion of time spent in opening and closing is so much to subtract from the total time in which the lens is acting to its full capacity to admit light to the plate.

With the focal-plane shutter the lens is always wide open; the total time of exposure is the total time of full action of the lens; there is no loss through the lens being partly shaded by opening and closing blinds during part of the exposure. The time of opening and closing of the blind shutter bears a relatively larger proportion to the total elapsed time, as the total time is shortened; therefore, the higher the speed of the two shutters, the greater the advant-

age of the focal-plane shutter; conversely, the slower the time, the more nearly the exposures come to time exposures, the less the advantage of the focal plane over the blind shutter.

In taking pictures of children the operator is very apt to believe he must have all the light there is. He runs back all the curtains, makes an appointment for the middle of the day, uses a light background and a couple of light screens, a fast plate, turns the face of the little sitter to the light, and is prepared to stop movement by setting his shutter at the "Instantaneous" mark, or pressing and releasing the bulb so quickly his hand aches from the strain. But the lighting goes by the board. The result is usually carried only by the "cuteness" of the child—the natural likeness (all children have possibilities—nine out of ten, when very young, make good pictures because unconscious) and the delight of mother in her offspring's pictured appearance—but as a beautiful piece of photography such a picture is usually to be put aside in favor of some photograph made when the light was managed for effect and not for volume.

This is not saying that beautiful child pictures are not and cannot be made without a focal-plane shutter. Far from it. But the man who screens his light for an effect on a child and makes a slow-bulb exposure, has to take his chances of the possible movement of his little subject, and with a baby less than three years old the possibility looms large to a certainty. So it is that several plates are frequently spoiled in one sitting by movement, to get the one which was lucky enough to catch a quiet moment.

Moreover, the picture taken when the baby is not trying to keep still, when he is entirely and completely himself, has frequently a spontaniety which makes all the difference between stiffness and grace.

The focal-plane shutter, applied to a camera, with any lens ordinarily used, will permit of exposures being made in a gallery of from a tenth to a fiftieth of a second or even higher speeds. If we take a fiftieth as a maximum of the possible speed, to get a negative sufficiently timed to make the kind of print we want, and this with all the curtains wide open, then with the shutter running at a tenth of a second, we can do with five times less light—which can be cut off with the curtaining and screening necessary to produce a graded illumination, which will accentuate what we wish in the face and figure and leave subdued those points we wish to leave unemphasized.

In other words, the focal-plane shutter will add to the speed of the whole performance—and this additional speed may be utilized in any one way, as desired. A slow exposure can be given with a slow plate; a faster exposure with a faster plate; an exposure faster than usual can be given under the same conditions of light, or the light can be subdued too low for the ordinary studio snap-shot and still be light enough for the focal-plane shutter.

Another point which should serve to call attention to its merits is this. It is not infrequently necessary to stop down the lens to get the necessary covering power when something more than a head and shoulders is to be made. Stopping down the lens of course requires a relatively longer exposure; but, within limits, the lens may be stopped down and snap-shots still be made with the focal-plane shutter which with the blind shutter would be impossible.

The illumination of the plate with the focal-plane shutter is absolutely even. Whether this is an advantage or a disadvantage is a matter of opinion, some portraitists claiming that uneven illumination with the preponderance of light at the centre tends to both delightful

softness and a rounded effect not obtained with slow exposures and even illumination. However this may be, the fact remains that with the focal-plane shutter the illumination is absolutely even, regardless at what speed the shutter may be run, and is, therefore, to be reckoned with as a known quantity. One advantage which this type of shutter has—it makes what slight noise it does produce *after* the exposure is over—the subject's attention is not attracted while the exposure is going on, or so that it will cause movement which will ruin a plate. Still another advantage which the focal-plane shutter possesses is uniformity of action. The usual studio shutter is either instantaneous and bulb, or simply a bulb shutter alone. In the former case, here is one speed, of unknown quantity, quicker than the bulb exposure. For the bulb exposure a man depends upon his experience and a species of mental counting, which is quicker than articulate thought. With the focal-plane shutter there are all the required speeds, from a tenth of a second up, and always alike—a tenth today will be the same next week; a twenty-fifth tomorrow is the same as it was yesterday. This leaves the operator free to consider only conditions of light. If he can approximate the conditions of curtains, screens, light, and the time of day, for an exposure, and can remember what speed he had his shutter set at last time he made a similar picture, he can gamble on a similar result.

The focal-plane shutter is a very simple piece of mechanism and very unlikely to get out of order. Its moving parts are few and substantial, and there is no likelihood of putting it out of commission with a little rough handling, as can so easily be done with the unnecessarily delicate blind shutters which are part of most equipments.

For special work, either in the studio or outdoors, the focal-plane shutter is a handy tool. If some one wants a picture of a pet dog or horse, the focal-plane shutter will do it where another would fail. If you are called on to make illustrations for some newspaper of some outdoor event, the focal-plane shutter will allow a snap-shot on a day so dark that you would never try it with any other type of shutter. As mentioned before, the use of the instrument really adds time to the working day at both ends—like a very fast lens—since it allows quick exposures to be made in lights which require slow ones with the ordinary type of shutter.

There has been some reason in existence, in the past, for the failure of the instrument to become popular. Until recently the only focal-plane shutters obtainable were clumsy, expensive, and, while they did the work, they did not have the material or workmanship to inspire confidence in the discerning buyer. Now, however, all this is changed. There are these instruments on the market which can be bought for a moderate sum, which are excellent in construction and action, and which are as durable as any piece of photographic apparatus could possibly be.

It seems hard to believe that the extra speed of these instruments in such work as portraiture should come from the continually wide-open lens, and particularly is this difficult to believe when one examines a blind shutter and notes the apparently instantaneous wink with which it opens and closes. Yet it is obvious that the quicker the exposure the greater the proportion of time which must be taken, in that quick exposure, to start the blades from a standstill, make them move their full limit of motion, stop, start back, attain a maximum speed and come to rest again in a closed position.

As the focal-plane shutter exposes the plate in overlapping sections, and suc-

cessively, it has been truly said that if the image moves during exposure it will be distorted in the resulting print. This is true in theory, just as it is true in theory that a perfectly proportioned reproduction cannot be made of a full-length figure, because the ends and the middle are different distances from the lens and, therefore, of different relative sizes. It does not need telling that apparently perfect full-length pictures are made all the time, and it should need no demonstration other than a glance at focal-plane pictures of objects in rapid motion to show that this distortion, while theoretically present, is, except in the extreme case of streak-lightning railroad trains, a matter of no possible moment. The shutter has, of course, the same advantages that the blind shutter has as regards using any number of lenses with one shutter.

The portraitist who will investigate, purchase, and use one of these shutters in quick work, will find that he is in a position to do work of this kind better, cheaper, and longer than his competitor. As the first expense is comparatively small, it is an experiment which should be worth the trying.

THE DAY OF UNREST.

[THE following, taken from "Pirie MacDonald's Page" in *The Photographer*, is so much to the point that we are glad to reprint it for the benefit of our readers.—ED. W. P. M.]

Yes! the day of unrest in photographic organization is here, with murmuring and shifting and search after—what?

The associations that have lived for a time and then passed out, and those that have lived for a longer time and still go on in the old way, seem to fail to fill the want, seem to lack that which satisfies.

They meet from year to year and the new officers are always confronted with the staring fact that something must be done next year that will fill the void, and they struggle and scold, devise new schemes and revamp old ones, work hard and often intelligently, and with result the meeting is a success, but to the truly discerning also a failure. The work has been well and heartily done: demonstrations and schools, art lectures, business talks with sage advice; really practical expositions, exhibitions, and social sessions; all good and all with result, but still failures!

Paradoxical! but so true that we are today living the *Day of Unrest.*

The man who could put his finger on a spot and say of a surety, "This is the place," would indeed be a wise one, and the wisest ones we know can only hazard a guess, and that is as far as I would dare to go.

It has long been said that "distance lends enchantment to the view," and surely a year makes a distance which should put the rosy hue over anything; but enchantment is an unreality, and lacking the heat and touch and vitality that this age demands; the year is so long that the sharp edge dulls, the wound heals, the friendship cools, and the memory of man grows dim.

Yes! that is my guess, the year is too long.

In 1891, at Buffalo, the membership of the P. A. of A. decided that annual meetings were too frequent, that people could not afford to go to conventions so often—that—a thousand reasons; so they altered the constitution to provide for biennial meetings, and the next meeting occurred in 1893, at Chicago, at the time of the World's Fair, a year when

more photographers visited Chicago than ever before or since.

The convention at Chicago had the smallest attendance for many years before or since. They altered the constitution then and there from biennial to annual meetings, on the ground that in the two years interest had waned, people had lost touch sufficiently to cut the attendance in two, and it was reasoned that, had the lapse been double as long, the half attendance would have been cut in two again.

They went back to the old system; it was a National body and for obvious reasons annual meetings were sufficiently frequent, and the P. A. of A. grew and strengthened.

But the Day of Unrest is here!

There is a danger that existing institutions may be blamed, may be considered faulty and mismanaged, of not standing up to their work; for that which has served us long and faithfully is always blamed first. My guess would be that the old-line organizations have done their work well, filled their places and their day, and their day is not yet done, but that there is work beyond their scope, work to supplement their work, to strengthen their kind of work and complete it, but it must be done by another kind of institution.

The Day of Unrest is here because there is the necessity for closer touch, for actual handling of conditions not discussions of theories, but grinding ill-shaped facts into practical, usable, every-day material.

Men of today want something more vital than a passing acquaintance or a memory.

Men today want to live every hour and be wide awake and happy.

Men today hold their heads high and their chests out, and they hate themselves when they have to lower their eyes or side step; they want to like other men and they want other men to like them.

The Day of Unrest is here, not because of an oppressing sense of wrongs but rather because of the yearning for intelligent, faithful, satisfying companionship.

Now, who is best calculated to make a satisfying companion for a photographer? Who knows the same kind of things a photographer knows? Who learned the same kind of things in the very same school? Who has the same sympathies, desires, ambitions? I should guess "another photographer."

Of all photographers, who is most nearly parallel to you in sympathy, desire, and ambition? Again, were I to guess, I should say, "your closest competitor."

He of all men knows just what you have to work against, just how cold your community is, just how hard it is to sell good goods at good prices. He made yesterday the mistakes you are making today and he will tomorrow commit the error you learned only yesterday how to cure. Who in this wide world is better fitted to fill the rôle of friend?

Why should he not fill that rôle?

He has that to give that you most need and you have what he wants. You can each make the other happier.

The Professional Photographers' Society of New York has felt the influence of the Day of Unrest and has come to the belief that the cure is to be found in closer organization—organization so close that the friction which comes from competition of workmanship or prices or personality may be developed—for the local close condition does make for friction; but, in getting rid of the cause of the friction, both parties must give, and giving is the cement with which to build friendship.

Yes, the Day of Unrest is here because we want to help and be helped, and it is here because so many of us say, "I would willingly extend the hand but he would not take it."

Don't imagine that you are the only

generous, clean-thinking man in the business. There are many, many of them. Your neighbor may be misjudging you too; find out.

The P. P. S. N. Y. has proved through the experience of the Metropolitan, the Central, and the Rochester Sections that close local organization brings the vital touch we have been searching for, and the Hudson River, the Mohawk, and the Buffalo Sections have been organized because they want to feel it and they will!

We should remember, however, that the result is reached not by the use of the hammer and the muckrake, but by the trowel. The *Talmud* says: "He who seeks a brother without faults will always want a brother."

Seek not so much to *destroy* evil, but to *build* good, and you will profit by the Day of Unrest.

SOME OBSERVATIONS.

BY W. N. BRENNER,
Cincinnati, Ohio.

I HAVE pleasure in complying with your request for a few prints for the magazine, but it is rather difficult to select such prints as will serve your purpose and at the same time be interesting and look well to your readers. While I do not wish to find fault with any one or his work, looking over reproductions of recent work and exhibits at the conventions makes it difficult to know what is pleasing and what may be termed good, and this leads me to mention a few notions I have regarding photographic work of today.

In doing this you may think me a pessimist or an over-severe critic, but I think photography has fallen back lamentably in technique, and this in the face of improved plates and apparatus, etc. I do not mean by this to have the hard, wiry, over-retouched, artificial work of several years ago; but to give the true tone, texture, and color values by correct lighting, exposing, developing, printing, etc.; to render dress, accessory, background, etc., in their natural relation, texture, and quality of absorbing or reflecting light, and lend their assistance to the proper rendering of the true flesh values. By this true flesh value I do not mean those dark, undertimed, greasy-face effects, or even those white on one side and black on the other side; but those that appear as though they were flesh and blood, as though they would yield to the touch, and if the model be a blonde let the work be made in such a way that this fact can easily be seen.

We are striving toward art in our work; but why should we ignore technique, when modern painters are judged and their pieces hung with technique as a certain part of the desideratum of the qualities their juries consider? The rigid adherence to the artificial lighting or blackening effect to get certain results has led us into many pitfalls, and in many cases are without the slightest excuse for the shadows or suggestion where they come from. Any human head or figure that has light enough thrown on it to make an impression on the plate will have a light and a shadow side. There will also pervade for a considerable distance surrounding those objects, light, air, and atmosphere, which enable the eye to see and distinguish not clearly, yet not blackly, objects or distance which gives the head and figure relief. This being true in nature, Why

do we strive at such incongruities as an old man reading or doing some delicate work, all in blackness, and which in reality he would not attempt except only in the very best light? Children who like the light and bright things are photographed at play, reading, or looking at pictures in a dark place surrounded by a ball of darkness that is not true to life, and more than likely would frighten the tots if the room should be darkened as it is made to appear in the photographs. Having photographs of certain effects of old masters to copy after has been very misleading. The fact of their being photographed explains their being too dark, as the browns, yellows, reds, and greens which act as a sort of relief, one to the other, etc., in the painting come to us much darker, and in the absence of color contrast flatten the effect in the originals.

The art instructors have taught us concentration and subordination, and we have seized upon shadow as being the one and only thing that would place our work on an artistic plane; and in fact this idea has grown so far that some seem to think the blacker the print the more artistic it is, and while the light must come from one source, shadows come from all sources, aided artificially and smudged that even in full figure with white dress there is not enough luminosily about it to give it the least semblance of naturalness—instead of the use of planes of both light and shadow to give breadth, depth, etc. The lack of knowledge of drawing is shown in a great many instances. True, the lens does the drawing; but equally true is it that selecting and setting that lens, camera, and swing-back may distort or throw out of drawing a head or figure. Then, too, the lighting may place the lights or throw the shadows in such a way as to distort or throw out an otherwise well-arranged composition, as a sleeve on white dress nearly profile, half length, is much nearer front and light than the face, and should surely not appear darker than the color of dress or neck of model, there being no excuse for the shadow other than subordination (misplaced in this case).

It is a regretable fact that we have no recognized scale of values to adjust our standard by. What one leader pronounces good, another condemns. Therefore, how unwise for any one to exhibit or compete without knowing in advance how and by what standard the work is to be judged. The mere blanket statement of art qualities, or good work, or even the best portrait or best exhibit, means absolutely nothing unless the judges are selected and are required to act according to the standard set down for each class. This holds also when there are two sets of judges; the first set will most likely cull the very ones the second would have selected.

Some New Yellow Screens. For years the commercial yellow screen has been but a poor thing, the color being decidedly wrong and necessitating an increase of exposure, which is really unnecessary. The difficulty has been to make a glass of correct lemon tint free from all tinge of orange and black. This has at last been accomplished by the well-known optical glass works at Jena, and the new glasses give as good if not better color rendering than the old with about half the exposure.

Toning Bath.—For good, rich, warm tones on any printing-out paper the following bath will be found specially adapted:

Water	20 ounces.
Tungstate	30 grains.
Sodium Carbonate	2 grains.
Gold Chloride	1 to 2 grains.

The more gold used the colder the tone, even though the print may be removed from the bath sooner.

A SIMPLE METHOD OF MEASURING SHUTTER SPEEDS.

BY ARTHUR PAYNE.

THE following method of testing the speed of photographic shutters is so absurdly simple that it is remarkable it has also the merit of originality—at least none of my friends, nor myself, have heard of it being described. It is applicable to any type of shutter, can be used by a novice, does not entail the use of any special apparatus, and gives a value which is independent of the efficiency of the shutter. That is to say, the actual actinic value of the exposure is obtained quite independently of the efficiency of the shutter.

The results obtained have a considerable margin of error, but the method does give readings which are sufficiently accurate for practical photographic use.

The principle of the method lies in the fact that an exposure of five seconds at *f*/64 is equal to an exposure of $\frac{5}{64}$ second at *f*/8 (which is, for all practical purposes, $\frac{1}{13}$ second). It is, therefore, essential to use a lens on which the diaphragm values are accurately marked, and also have a range of values extending from *f*/8 to *f*/64. If the lens be obtained from a good maker, these diaphragm markings may be accepted as correct, otherwise they should be checked by any of the methods that are to be found in the text-books or in the back numbers of this magazine.

The method is simplicity itself. Place two plates of the same brand in the dark slide or magazine; focus the camera upon an open landscape view so that a fair amount of sky is included in the picture, and expose half of one plate, for five seconds, with the lens working at *f*/64. Immediately following this exposure, the other plate is inserted in the camera and the dark slide shutter withdrawn as before, the diaphragm changed to *f*/8 and the shutter set to what is marked as $\frac{1}{15}$ of a second, and this exposure is given to the plate.

The two plates are then developed together in the same dish, and as they are probably made with the same batch of emulsion, the speed of development will be the same for both plates, so that if they have received the same, or very nearly the same, exposure, the two images should appear simultaneously; if they do not do so the plate upon which the image is first seen will have received more exposure, and the rate at which the images appear will give a good idea of the difference between the exposures. The results may be confirmed by continuing development until the plates are considered to be fully developed, when they are simultaneously washed under the tap and fixed with hypo. After they are fixed and rinsed with water, the two plates are superimposed in such a manner that the unexposed portions of the two plates are brought over the views, which are consequently in juxtaposition, and may then be easily compared for density and detail. As the two plates are coated with the same kind of emulsion, the density of deposit in the sky should be equal if the exposures are equal, and, of course, the two negatives should be identical in every respect.

In the Watkins list of speeds we have 60 as representing the slow plate, which most makers call their "ordinary." Numbers ranging from 70 to 100 represent the "rapid" variety, and after that come numbers from 150 to 250, representing the extra- and ultra-rapid brands. This is a vast field to choose from. Speaking generally, the plates of a higher speed-number than 180 are only in-

tended for special work under exacting conditions, and they require special care in manipulation.

Most hand-camera users choose a plate with a speed-number of 180 or thereabouts. I do not mean to infer that these plates are unreliable, but in most cases where a special rapid plate is employed, even with a hand camera, an ordinary plate would do just as well, be easier to work, and probably give a better negative.

The ordinary plate has another decided advantage, in that it is amenable to almost any developer.

It frequently happens when away from home one is forced to put up with any solution that is locally procurable.

For instance, recently I wanted some rodinal developer in a hurry. It was not obtainable in the country town near which I was staying. I asked for pyro, with the same result, likewise hydroquinone; but, curiously enough, an odd packet of tabloid amidol was forthcoming. I took this rather than go without, and on reaching home opened the package. As I suspected, the amidol looked rather dark, and the preservative somewhat mouldy and crumbly; nevertheless, I resolved to try my luck. I made up the solution, which I suspected would be weak in action, to normal strength, and added a good dose of bromide to prevent chemical fog.

I had half a dozen plates to develop, two only of which were ordinaries, the rest were four times the speed roughly (Watkins 300).

The four rapid plates all appeared misty and foggy and very thin on fixing. Their appearance during development was not encouraging, so I had little hope of them.

But I was certainly surprised on developing the other two to find that they came up clear and clean, and proved quite excellent negatives.

Amidol is not an ideal developer for plates, to be sure, but I certainly want nothing better than the results I got from this particular solution on two Ilford ordinary plates.

Apart from developers altogether, it is generally admitted that slow plates keep much better than quick ones. One may go into a dealer's shop in a country town out of the season for a box or two of one's favorite brand. He probably does not keep it; in fact, he may only have a dozen boxes in his stock. Should you be uncertain as to their age and condition, choose the slowest.

Such slight differences of exposure as between $\frac{1}{13}$ and $\frac{1}{15}$ of a second are of no practical importance in ordinary photography. As a matter of fact it is not necessary to consider any smaller differences than halving, or doubling the exposure, because the latitude of the plate more than compensates for anything less. This method of testing the shutter speeds, however, will detect the difference between $\frac{1}{15}$ and $\frac{1}{20}$ of a second.

Let us assume that instead of obtaining a satisfactory result at once, we find the reputed $\frac{1}{15}$ second exposure at *f*/8 appears first during development, and that it is the denser negative when complete. Repeat the tests, exposing the half of one plate for, in this case, five seconds at *f*/45, and the other plate is given the same shutter exposure ($\frac{1}{15}$ second) as before at *f*/8. Now five seconds at *f*/45 is equal to $\frac{1}{7}$ second at *f*/8, so that if the two images appear simultaneously, and are identical in character, it is safe to assume that the speed marked $\frac{1}{15}$ is really only $\frac{1}{7}$ second, and this fact is recorded. But in case the time-exposure has the advantage, we know that the actual exposure at *f*/8 lies between $\frac{1}{7}$ and $\frac{1}{15}$ second, so that it is sufficient for our purpose if we take the approximate average of these two exposures and mark this speed as equal to $\frac{1}{10}$ second.

On the other hand, we may find with the first test plate that the supposed $\frac{1}{15}$ second is considerably under-exposed, so that the shutter is working at a higher speed than it is marked. Repeat the tests, and give two exposures with the $\frac{1}{15}$ second speed at *f*/8 against one exposure of five seconds at *f*/64. Then, if we find upon developing these two negatives that the exposures were equal, we know that the speed marked $\frac{1}{15}$ second is really $\frac{1}{30}$ second. Should the time exposure have been, in this case, shorter than the shutter exposure, we know that the true speed is something between $\frac{1}{15}$ and $\frac{1}{30}$ second, so that we take the average of these two exposures, and assume that the shutter is working at $\frac{1}{22}$ second. But if the shutter exposure be still under-exposed with two exposures, we again repeat the tests giving three exposures, each of $\frac{1}{15}$ second duration at *f*/8, against one of five seconds at *f*/64; and if these tests give uniform results, then the speed marked $\frac{1}{15}$ second is really working at $\frac{1}{45}$ second.

In a similar manner you may calibrate the remaining speeds of the shutter when they are changed by altering the tension of a spring, though this is not necessary when the speeds are altered by varying the width of slit in a focal-plane shutter, as will be explained.

To test the accuracy of the speed marked $\frac{1}{25}$ or $\frac{1}{30}$ second, give two exposures at *f*/8 with the shutter working at this speed, against one exposure of five seconds at *f*/64. Perhaps I had better amplify this point. As I have shown, five seconds' exposure at *f*/64 is equal to $\frac{1}{13}$ second at *f*/8, and half of $\frac{1}{13}$ is $\frac{1}{26}$, therefore two exposures each of $\frac{1}{26}$ second duration are equal to $\frac{1}{13}$ second at *f*8, which is also equal to five seconds at *f* / 64. In making these two exposures it is sufficient if the shutter be released, and then reset whilst the front of the lens is covered with a piece of black cardboard, after which the plate may receive the second exposure of $\frac{1}{26}$ second. Avoid disturbing the camera or else the two exposures will not coincide on the plate, and the test will be useless. The shutter of the slide should not be closed between the two exposures.

By using multiple exposures it is quite easy to check the accuracy of all speeds up to $\frac{1}{100}$ second, and even beyond this limit, as is shown in the following table:

Five seconds at *f*/64 = $\frac{5}{64}$ or $\frac{1}{13}$ second at *f*/8.

Exposure value.	Repeat exposure.		Shutter speed.
$\frac{1}{13}$ second.	...	say	$\frac{1}{15}$ second.
$\frac{1}{26}$ "	twice	"	$\frac{1}{25}$ "
$\frac{1}{39}$ "	3 times	"	$\frac{1}{40}$ "
$\frac{1}{52}$ "	4 "	"	$\frac{1}{50}$ "
$\frac{1}{65}$ "	5 "	"	$\frac{1}{60}$ "
$\frac{1}{78}$ "	6 "	"	$\frac{1}{80}$ "
$\frac{1}{104}$ "	8 "	"	$\frac{1}{100}$ "

These tests must be made upon a day when the light is uniform in character.

Though it is advisable to secure a reasonably correct exposure upon the test plates, this must be obtained by selecting a brand of plates of a suitable speed to give a correct exposure with five seconds at *f* / 64, at the time that the tests are made. As a rule, what is known as an "ordinary" plate will give a good result, but much depends upon the character of view and the amount of light. I prefer to make these tests when the sun is shining, during a day when the sky is fairly free from clouds. The method is not sufficiently accurate to warrant the use of a standard light, and as the check exposure at *f* / 64 is made against every shutter speed tested, and this must always be done, the variation in the light is negligible.

To obtain the most accurate results it is essential that the tests should be made upon plates that are of the same brand, coated with the same batch of emulsion. This point is obtained if all the plates used are taken from the same box, but if it is necessary to use more than one box of plates, take each

pair of plates used for one test out of the same box. I have given the time of five seconds at $f/64$ as a rough standard, because it is easily measured by the aid of the seconds' pointer on a watch; a shorter period than this cannot be so easily and accurately measured, and it is hardly necessary to extend the time to ten seconds, though, of course, it is quite possible to use it, if desired, by altering the table of speeds to correspond to ten seconds at $f/64$, which is equal to about $\frac{1}{7}$ second at $f/8$. However, this is really quite unnecessary.

When calibrating the speeds of a focal-plane shutter, when many of the speeds are obtained by altering the width of the slit in the shutter blind without changing the tension of the driving spring, it is unnecessary to do more than test the speed of the shutter on the different spring tensions with the slit open to its widest extent, for the intermediate speeds may be calculated by measuring the widths of the slit. These shutters usually have five different spring tensions, so that if the speed of the shutter be found with a slit, say, two inches wide on each of these different tensions, it is easy to calculate that a slit one inch wide gives half the exposure of a two-inch slit, and a quarter of an inch opening gives one-eighth the exposure of the two-inch slit.

Some focal-plane shutters are constructed in such a manner that the width of the slit varies from four inches to one-eighth of an inch, which gives a range of exposures varying from the normal down to $\frac{1}{32}$ of this normal speed; and if the speed of the shutter be found to be $\frac{1}{20}$ second when the slit is four inches wide (as it is in my camera, though the maker had marked the speed as $\frac{1}{6}$ second), it is obvious that the exposure with a slit one-eighth inch wide on the same spring tension is $\frac{1}{640}$ second. So that without altering the driving tension of the spring, there is obtained a series of speeds of $\frac{1}{20}$, $\frac{1}{80}$, $\frac{1}{40}$, $\frac{1}{80}$, and so on, up to $\frac{1}{640}$ second, merely by altering the width of the slit in the blind.—*Photographic Monthly.*

Portraiture in Natural Colors.—The magnificent studio opened by The Rotary Photographic Co., in London, about twelve months ago has been transferred to Foulsham and Banfield, and though they will continue doing the fine three-color portraiture for which the studio was originally established, they will also undertake all classes of photographic work. Perhaps this seems like a logical development, yet one cannot help feeling regret that the bold attempt to establish one studio for color portraiture only should have received a check.

The Rights of the Sitter were maintained in the action of a Brighton (England) clergyman against the *Daily Mirror.* The clergyman was interviewed, and gave permission for his cats to be photographed on the condition that he should not be included in the picture or identified with the cats. The photo-interviewer appears to have broken both conditions, and on the matter coming into court, the defendants apologized for the publication, regretted that they had been misled, and offered to pay $200 toward complainant's initial costs, as well as to pay the costs of the case.

Home-made Plate-sunk Mounts. To make a sunk mount, paste a square frame-shaped piece of very stout paper or thin card on to a piece of cardboard. When this is dry cover the whole with a sheet of brown paper well pasted on the under side. With a smooth bone paper knife press this well where it comes over the edges of the paper or card frame underneath it. The result is a sunk surface on which the photogram to be mounted may be effectively placed.

By W. N. Brenner, Cincinnati, O.

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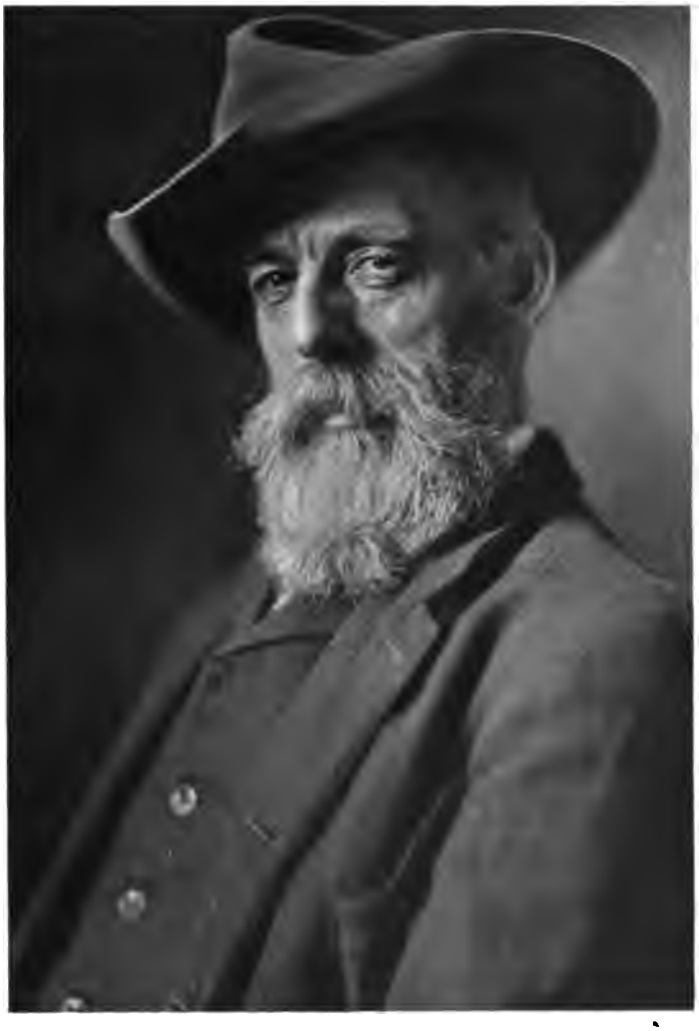

By Seabrook Bros., Charlottesville, Va.

KARTENSPIELER.
By William Kubeler, Darmstadt, Germany. From "Das Atelier."

ART PRINCIPLES IN PORTRAIT PHOTOGRAPHY. BY OTTO WALTER BECK.

REVIEW BY SIDNEY ALLAN.

THE reading of books of this character should always be recommended. They cannot help being instructive. They make the reader think, even if he does not agree with a single point of the author's argument. No matter how involved such a book may be and how little it may carry out the author's original intention—I suppose any man who tackles this intricate subject intends to do his very best—it will in one way or another suggest a practicable idea to the student of composition. And for persons in need of such information the book is written.

At the first glance the Beck book makes a good impression. It is bound in good taste, of an agreeable size, opens well, the print is large and legible, and the diagrams clear and fairly well drawn. I really think that every photographer should have the book in his library, even at the risk that he may occasionally feel like hurling it at somebody.

The principles of composition are very elusive. They are existent, and underlie and determine (unconsciously perhaps) the construction of every work of art; but it is an exceedingly difficult task to convey the nature of these principles in a clear and a halfway comprehensible manner. The diction in Mr. Beck's book is, on the whole, praiseworthy; he tries hard to be simple, matter of fact, and to the point. I personally object to phrases like "lines that laugh and sing themselves into tone," but his diction is not hopelessly clogged up like that of other "composition" writers, and that is a decided merit. He was wise enough to avoid the too frequent use of geometrical terms.

All this, however, is of secondary consideration. The question is, What does this particular book teach us? Does it really help us to make a good portrait or a better one than we can make without it?

A ticklish question. I really do not know what to say. To those who have never given composition a serious thought (and I believe there are hundreds of photographers who never have) it will no doubt give many a valuable hint. But they have to discriminate—and that is a decided danger. Will they be able to do so?

Books of this kind should be strictly objective. They should deal with the subject as much as possible with scientific precision, without the influence of personal likes or dislikes. Mr. Beck handles the subject in a decisively subjective manner. He sponsors "artists' inventions washed in the plate." He even goes farther than that. He states that the German portrait painter, Lenbach, made it a practice to have his sitters photographed, as they give him a record of the exact form upon which he could elaborate in paint according to his own fancy. Mr. Beck continues: "The true value of the plain negative should be to the photographer what it was to this artist. That is, it should procure for him a likeness. Having secured this he *may raise it to portraiture* by the chemical treatment of the plate."

This means, in other words, that no photographer can produce portraiture unless he indulges in—faking. Mr. Beck is very decided on that point. He is shrewd enough to say in this particular instance "chemical treatment," but he really means the printing-in of

accessories, backgrounds, and the wilful change of photographic facts. His book winds up with various "processes" wherewith such results may be obtained.

This seems to me a rather peculiar way of teaching composition, as it limits whatever didactic faculties he may have from the start. Eighty per cent. of all practising portrait photographers would have to go out of business or go to a drawing school first. A very thorough knowledge of drawing is necessary for the kind of manipulation he advocates.

He himself must have realized this, as the examples of manipulation which he furnishes in his book—however artistic his intention may have been—are anything else but esthetically satisfactory. With two or three exceptions, I invariably prefer the "mere fact rendering" to his peculiar, muddy, wish-washy transformations. This is merely my personal opinion. But I believe that the majority of any jury of painters or photographers would agree with me. A Eugene, Kasebier, Steichen, Coburn might render such additions and changes successfully; the book in question utterly fails in this respect. Does Mr. Beck really think that the huge scarf, such as no child ever wears, improves the portrait quality of the little girl (Fig. 115) that is so charming in the straight print? Or that the delicate texture of a beard (Fig. 86), even if it is a trifle monotonous, is rendered more artistic by a few white daubs? I perfectly understand what Mr. Beck means, but it is rather unfortunate for him that his illustrations are so deficient in quality. Is it not a rather dangerous experiment to advance a theory, to attempt to prove it by illustrating it, and then to fail utterly in accomplishing it? A few good selections from our leading professionals would have helped the book and his theory immensely. Perhaps he was not able to procure them, as few photographers, no doubt, are willing to display the mechanism of their work. Well, that we who read his book can not help; we can only criticise and judge what we have before us.

Mr. Beck tries to prove the very same thing by showing us a Van Dyck portrait (Fig. 51), first with the original painted background and thereupon with a blank photographic background, and fails again. Mr. Beck argues that the blank background is "hard, metallic, impenetrable, unassimilative." So it is. A blank background would be absurd in such a picture. The painter treated the lines and forms in the background in such a way as to harmonize with the lines and forms of the figure. But this does not prove anything. A photographic portrait is a new invention, and there is no reason why a plain background under certain conditions could not be rendered artistic. (Hollinger has proved that to my satisfaction.) No! Mr. Beck is wrong if he thinks that every background must be filled with incongruous blotches and shapes, and, mind you, these blotches and shapes must be put there by manipulations. Why does not Mr. Beck teach us how to arrange figure and accessories, and in such a way that they produce, photographically, a harmonious composition?

Of course this peculiar trend of thought has nothing to do with the principles of composition themselves. As far as their intrinsic value is concerned, it is really all the same whether they are faked in or produced by "good straight photography," and for that reason it would have been more logical if the author had simply exploited them without making them the promises for something which has really nothing to do with composition. Writers of such books should teach the photographers simply how to make a good composition, and leave the problem how to do it technically to them.

Mr. Beck, instructor in pictorial composition as he is at the Pratt Institute, seems to be thoroughly familiar with his subject. He does not impress me with being quite as learned as his confrère, Mr. Poore; but he has the advantage of being more direct. He merely tells the most essential, what everybody ought to know, and it is generally well told. His analysis of Henner's "Fabiola" is capital. Any photographer—he who knows as well as he who wants to know—may read it with profit. Mr. Beck is best when he is simplest. In didactics it is after all the kindergarten style which convinces most. As soon as one goes too deeply into the subject, it becomes too intricate and subtle to be conveyed in simple language, and it becomes difficult for others to follow the argument.

The trouble is that the faculty for composition is largely an inborn or unconsciously acquired gift. Painters like Sargent and Alexander would laugh if anybody would talk to them about the "velocity of lines," and yet they get all that there is to be said about lines into their work. Of course, these men are men of genius, specially adapted for their special vocation. There are many painters who could well afford to study Mr. Beck's chapter on Spot Arrangement, and improve their art.

On the other hand, study alone will never make a man a master in composition. It is too much a matter of temperament. But every one in the pictorial business should know the most essential principles of composition, and these, I believe, Mr. Beck's book will teach as well, if not better, than any other one on the market. As said before, the book is worth buying if for no other purpose than to serve as a stimulant, to sharpen our wits and to make us think once more of lines and spots, of tone and color, light and shade, and all those various elements which enter into successful pictorial composition.

THE BUSINESS END OF PHOTOGRAPHY.*

BY ALVA C. TOWNSEND.

THE subject assigned to me is one which is now receiving more consideration by the intelligent members of our profession than at any time in the history of photography. It is most essential that it should, if photography is to interest young men who have the capablities of accomplishing great things for themselves and our profession.

Let us consider then, for a few moments, the business end of our vocation. The first thought that occurs to a young man when considering photography as a life work is the commercial or financial side, and wisely so, for from his labor he hopes to receive returns that will provide for himself and those depending upon him, not for the present alone but for the future. The one thing every man owes himself and family is a competency in old age. Will photography secure for him these results? I believe it will, or I think I would be looking for something different before the sun disappeared again in the western horizon.

We look about for successful photographers and when we locate them we find they are the ones that are adhering strictly to business methods—methods practised by men in other lines of mercantile life. The trouble with us is there are so many who do not put these prin-

* A paper read before the Photographers' Association of Nebraska, May 22, 1907.

ciples into practice, and then we wonder why failure follows our effort.

We are here in convention assembled for the discussion of methods whereby we can improve ourselves. The pre-eminent and paramount quality for success in photography is the ability to produce portraits that the public will buy, and of such a superior quality that the photographer will gather about him a large patronage.

"In framing an artist, Art hath thus decreed,
To make some good, but others to exceed."

This is truth indeed, and we may well consider and learn, if possible, to what class we belong. We will not presume to classify. It is safe to say that those who are attending conventions, and reading our many publications, are more likely to be among those that excel than those who stay at home and smile complacently, and sometimes sarcastically, at their fellow-competitor who foolishly spends his profits of a month in the hope of reaching a higher degree of excellence.

I believe you will all agree with me when I say that no man can expect to establish a studio and succeed having only served an apprenticeship of six months or a year. If success does come to him it will be under a handicap that the majority of men are never able to overcome.

The successful men of the past are the men who paid well and served long, many of them doing menial work about the studio in which they learned; but when they did embark they were generally equipped with a knowledge that would put us younger men to shame, and their efforts were crowned with success.

Today we have to pay the youngsters to learn, and in three months they think they know about as much as their instructors, and many times borrow money enough to buy an outfit, and you know the rest. This is the way we make an unsuccessful photographer.

Why is photography not attracting more bright young men of our communities? There are many who might be attracted if it were not for this very fact, and we are to blame.

I cannot leave this phase of the subject without emphasizing this condition of affairs, because it is a most serious and vital question to the welfare of professional photography. Many amateurs are producing more artistic and commendable work than hundreds who pose as professional photographers and who are utterly incapable of producing a portrait.

I believe the ultimate solution of this problem is the school of photography, and when a standard of excellence is established, photography will take the longest step forward in its history. We can then hope for some regulation by law, similar to that of medicine, pharmacy, or the legal profession.

I presume we all concede the fact that capital is one of the fundamental requisites in the establishment of a business. Many a business that might have otherwise been successful has been wrecked upon the rock of lack of capital. In these days, when there are so many stock houses willing and anxious to sell goods, the temptation is great to the beginners to embark in business before they are justified, and embarrassment generally follows. There is nothing we should hold more sacred than our credit, for when once shattered it is, like reputation, hard to restore.

I mention this because so many of us are negligent along this line, and photography as a profession suffers unjustly. The wise business man is the one who is discounting his bills and thereby adding to his capital.

I want to insist that the young man who is about to establish a business should first know positively that he can produce work that an appreciative public will seek, and then follow one of

the foundation principles of good business; guard your credit as sacredly as your honor. Integrity is a priceless asset.

It has been said that goods bought right are more than half sold. This holds good in photography as well as in any other business. Watch the market and buy as low as you can. Take advantage of the discounts which are, generally speaking, liberal. This source of revenue amounts to dollars in a year and should enter into the life of every successful studio.

The care of our patrons and the work of the reception-room clerk is most essential in a money-making studio. Upon this department the problem of success largely depends. I think here is where a woman can excel. She should be a business woman in every sense of the word—quick to perceive, affable in manner, neat in appearance, adroit in perception, slow to anger, and long suffering. The reception-room woman can in many ways increase the business by suggesting ideas to the customers and advance the amount of the order many times beyond that which the customer had anticipated. The handling of proof and getting orders from extra negatives is an art that should be studied. If an operator—and that word should never be used outside of a sanatorium—puts his life and individuality into a series of negatives, he certainly should have some one capable of securing an order commensurate with the effort, or else he has wasted his vitality.

It is in the reception-room where the business methods of a studio are put into practical use. The reception-room is the one place we must practise good business principles, if we practise them at all. I contend for one price to everybody. I do not believe it wise to enter into an agreement with a competitor to maintain uniformity of price, but advance the idea of putting the price just a little higher. This may require a little nerve; but if the quality of your work is such that the public appreciate it, the price will not enter into the transaction as much as you think.

The value you place on your production is the estimate that conveys to the public the degree of excellence you have attained. A good business rule, I believe, is this: Do not attempt to deliver a picture that you would not accept yourself. I realize from experience that this sometimes means an order conveyed to the waste-basket and a delay in the delivery of the order, but it is better to disappoint a customer than to dissatisfy him.

A successful business is made up of these little attentions, and out of them must grow a system which should be practised from the hour the door is opened until the last print is on the card, or negative developed. Every well-conducted studio will have some approved method or failure in its pursuit.

The duplicate business is only properly cared for when a system of registration is in vogue, and without it many dollars are lost annually. A system of looking after those who may have had sittings and are neglecting their order is most essential.

Another; keep the studio clean and in order, and the display case or window attractive. These are but a few suggestions that I believe are good business propositions and should receive more of our consideration.

It is needless for me to mention the necessity of a system of book-keeping, for of course no successful photographer is without this if he fails in all others. We are fortunate that the credit system does not, in a very large measure, enter into our profession, and generally speaking we do business on a cash basis. Yet for that very reason we should guard ourselves, or we will allow the few accounts that do exist to run over the usual day of collection. People will

pay a bill promptly presented, which allowed to run may become what is termed a hard account. "Procrastination is the thief of time," and often causes one to become ludicrous, as in the case of the druggist who allowed a certain account to remain unsettled and, when finally presented, the first item was a pound of chocolates and the last a nursing bottle.

I cannot close without mentioning a thing that I believe is not good business, never has been, never will be, and yet practised by too many, and that is Sunday opening. I do not believe a man makes anything by a desecration of the Sabbath, even if church people do sometimes patronize us on that day. I claim that it is bad business in more ways than from a religious standpoint.

No man can work seven days in a week, keep it up very long and retain his health, and without health how long can he do business? Men do it, I know; but I notice that in a few years the doctor prescribes a change of climate or a rest for a year or more. I believe there is not a travelling man on the floor of this convention but will bear me out in the statement I have just made.

I can quote you two cases and not go out of Lincoln. I have in mind one whose health has been impaired, and who, now realizing the necessity of a day of rest, rather than give up his Sabbath business, is taking Wednesday and only two hours for business on Sunday. He says he expects to cut out the two hours very soon. Had he closed Sundays years ago, I believe he would have been as well off financially and not suffered a breakdown physically.

The subject of advertising I but suggest. Editors of magazines and journals are treating this vast subject with great thought and we realize fully its necessity in carrying on a successful business. There are so many methods, some applying to one locality and some to another, that the chief point to my mind is to be judicious in choosing; but by all means advertise. The business end of photography! There is no end; it is one round after another, conditions changing every year the methods of today outgrown tomorrow.

THE PURITY OF SODIUM CARBONATE AND SULPHITE.

BY CHAPMAN JONES, F.R.P.S.

THE purity of chemicals is a matter that must affect every one who uses them, especially those who expect them to produce definite results. But purity is not easy to define in a practical sense, for, absolutely speaking, nothing is or ever can be pure. A substance is generally called pure when the extraneous matter present is in such a small proportion that its effect cannot be traced, and the result is, therefore, sensibly the same as if an absolutely pure article had been used. The same substance may, therefore, be properly spoken of as pure with reference to one of its uses and impure with reference to another, and when the word "pure" is used commercially, it merely indicates that the substance is pure enough to pass certain tests, or that it is fit for use in those cases that require a reasonably pure article.

Purity, therefore, is always a matter of degree; and the same may be said of the tests for impurities. Every test has its limit, and requires a certain amount of the substance tested for (the impurity) to give a positive result. If less than this amount is present the test fails to reveal it, and the substances tested passes as pure, though another and more

searching method might detect the impurity sought for.

It is impossible for one who has not studied and practised the art of analysis to make reliable tests, just as one who has not studied surgery cannot be depended upon in case of accident. But an ordinary person may be taught how to treat a simple cut or a burn by a few easily understood instructions, and to a similar extent he may sometimes learn how to distinguish between a good and a bad sample of a chemical substance that he requires. Most people have the good sense to recognize their limitations in such matters, but to those who have not, the little knowledge is dangerous.

Of the definite chemical substances that the photographer uses, sodium carbonate and sodium sulphite are the two that are the most likely to vary. There is no simple rule-of-thumb method by which the purity of either of these may be determined. But if the user of them can only understand the ways in which different samples are likely to vary, he will have gained something.

Sodium carbonate crystals, as usually obtained, contain considerably more than half their weight of water, and when exposed to the air tend to lose some of this water. As it goes the crystalline structure is lost, and the clear, glassy fragments become opaque. A sample that has changed in this way will obviously give a stronger solution, weight for weight, than a sample in good condition. To avoid this possible uncertainty, it may be preferred to use proportionately less of the so-called "dry" salt, that is, the salt with the water of crystallization driven off. But here the case is rather worse, for the "anhydrous" salt is never really free from combined water, and by exposure to the air it will take up more water without changing its appearance. There is no indication of the alteration here as there is in the first case.

As to the presence of impurities, the safest procedure for those who are unskilled in chemical manipulation is to buy the "pure" salt from a reliable dealer, and if it can be obtained in a quantity of not less than a pound, it is generally possible to get it in the original bottles as issued by the manufacturer. If this cannot be done, it may be useful to know that the chief impurity is sodium sulphate, a compound that looks something like the carbonate, but is quite useless for photographic purposes. To test for it, add, while stirring the liquid, hydrochloric acid or nitric acid to a solution of a small quantity of the sample until blue litmus paper is turned to a bright red by the mixture. Then add a solution of barium chloride and look for a white precipitate. A good sample will give a cloudiness, for a little sodium sulphate is almost always present; but a copious insoluble white precipitate, one which, when it has settled down, bears a notable proportion to the amount of sodium carbonate taken, shows that the sample is not satisfactory.

Sodium sulphite may be judged of and treated very much as stated for the carbonate. The crystals contain, when pure, just half their weight of water. If opaque, the outside of the crystalline mass has probably lost water by exposure. As the sulphite slowly takes up oxygen from the air and so forms sulphate, it is often stated that the opaque part is sulphate, but this is a mistake, though it will probably contain more sulphate than the original substance. The two chief impurities likely to be present are sodium carbonate and sodium sulphate. The sulphate may be tested for in the same way as described in the previous paragraph, but it is well to add rather more acid. Sulphate will always be present, and a sample must not be condemned unless it contains a notably greater amount than a sample known to be satisfactory. It is not easy to de-

scribe a test for sodium carbonate, but a very little dilute hydrochloric acid added to a small quantity of the sulphite dissolved in water, should give a solution that will turn litmus paper bright red. Here, again, a satisfactory sample should be compared with the doubtful one, weight for weight. The testing of sulphite needs far more skill than the testing of carbonate of sodium, and therefore the results obtained by those untrained in chemical work are more likely to be misleading.

The behavior of the substance when used for development will indicate to those who do much photographic work their probable purity. An unsatisfactory sample of the carbonate may cause development to be either too slow or too fast, in the latter case with a tendency to fog. If development is unduly slow, the carbonate probably contains extraneous inert matter, such as sodium sulphate; if too fast, it may have lost water by exposure, or it may be common "washing soda," and contain a little caustic alkali. The chief trouble to fear with sodium sulphite is its inefficiency in preventing the darkening of the developer and the staining of the plate, because of its containing the useless sulphate or a notable proportion of carbonate. As the latter increases the alkalinity of the developer it will quicken development and tend to produce fog.—*Practical and Pictorial Photographer.*

A CORRECTION.

MR. G. (Papa) CRAMER
Photo by S. D. Strong, Chardon, O.

In our last issue we reproduced a photograph of Mr. G. Cramer which was credited to Mr. Felix Raymer. We have since received from Mr. S. D. Strong, of Chardon, Ohio, one of our subscribers, a portrait of Mr. Cramer which we reproduce alongside, both prints being from the same negative. Mr. Strong informs us that he made the negative, which he still has in his possession, when a student at the Illinois College of Photography, and he naturally feels that he should receive the credit as maker of the picture.

In reproducing the work of photographers our first aim is to see that proper credit is given, and we gladly reproduce the picture over Mr. Strong's name.

Mr. Raymer, in selecting the print to illustrate his article, doubtless made an error in supposing that this print was from one of the numerous negatives that he must have of such a popular subject as "Papa" Cramer. The negative in in question was selected as the best out of those made by students of one of Mr. Raymer's classes at the College.

$1500 PRIZE CONTEST FOR PHOTOGRAPHERS.

A NOVEL PHOTOGRAPHIC ADVERTISING CONTEST OPEN ONLY TO THE PROFESSIONAL, FOR CASH.

One Thousand Dollars.—We make the first prize in our Photographic Advertising Contest $1000 because we want to prove to the world that there are men who can furnish us with photographs that are better, from an advertising standpoint, than anything that can be drawn.

Photography is already taking an important part in advertising. Every issue of the great magazines shows how the advertiser is making use of photography in exploiting his wares. But there are undeveloped possibilities. In advertising there is work for both the portrait photographer and the commercial photographer. The man who has a patent churn turns to the commercial photographer for a picture of that churn; but in developing his business he is likely to turn, sooner or later, to the portrait photographer for a picture of an attractive girl operating that churn. For the professional photographers who can combine good clean photographic work with an advertising idea there is good business at their own price.

For the double purpose of demonstrating the possibilities of photography in advertising and at the same time securing for ourselves a series of superior pictures to be used in our Kodak advertising, we are offering fifteen hundred dollars in cash under very simple conditions.

The work will, we believe, prove interesting to every lover of the art, and is likely to prove profitable by leading up to a new and as yet uncultivated field. Besides, the prizes are worth while.

Terms.

1. Each picture is to contain a figure or figures and is to be suitable for use as an illustration in advertising the Kodak or the Kodak system of amateur photography.

2. Each entry to consist of three pictures 8 x 10 or larger.

3. *Prints only* to be sent for competition—not negatives.

4. Prints must be mounted but not framed. (Mounts should show about one inch margin).

5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures, in sets of three, as he may desire.)

6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility of loss or damage.

7. The negatives from which all prize-winning prints are made are to become the property of the Eastman Kodak Co., and are to be received by it in good order before payment of prize-money is made.

8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in the case of a minor, the written consent of a parent or guardian) to the use of the pictures in such manner as we may see fit in our advertising.

9. All entries should be addressed to

EASTMAN KODAK CO.,
Advertising Department. Rochester, N. Y.

10. In sending pictures, mark the PACKAGE plainly, "Photo-Advertising Contest," and in the lower left-hand corner write your own name and address. Then write a letter as follows:

I am sending you today by Express/Mail charges prepaid,.....prints. Please enter in your Photo-Advertising Competition.

Yours truly,

11. The name and address of the competitor must be legibly written on a paper and inclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

12. We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize winners.

13. Only recognized professional photographers conducting a studio will be allowed to compete.

14. This contest will close November 1, 1907.

Prizes.

First prize	$1000.00
Second prize	500.00

The Jury of Award.

As photographic excellence and advertising value are both features of importance, it has been our endeavor to secure, as judges, men who are recognized as among the leaders in their respective lines. In this we have been fortunate, and we are pleased to be able to announce that the following-named gentlemen have consented to act:

MR. GEO. H. HAZEN,
MR. PIRIE MACDONALD,
COL. THEODORE C. MARCEAU,
MR. HENRY D. WILSON,
MR. E. W. SPAULDING.

To the photographers of America Col. Marceau and Mr. MacDonald need no introduction. In the business end of the publishing world the other gentlemen are likewise well known: Mr. Spaulding is advertising director of the *Ladies' Home Journal* and the *Saturday Evening Post;* Mr. Wilson directs the advertising end of the *Cosmopolitan*; Mr. Hazen, of the *Century*. All of them are ripe in experience—progressive. They are just the kind of men to weigh accurately the advertising value of an idea.

Suggestions.

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak advertising.

As reproductions of the pictures will often be in small size, too much detail should not be introduced.

Pictures for reproduction should be snappy—vigorous, for they lose much by the half-tone process.

Where apparatus is introduced, it should be up-to-date. If you haven't the goods, you can borrow.

There may be possibilities in introducing the Kodak Tank Developer idea.

A girl? If she is attractive, refined, by all means, yes—unless you think you can better impress the judges in some other way.

It is highly probable that we shall want to secure some negatives aside from the prize-winners. In such cases special arrangements will be made.

EASTMAN KODAK CO.,
Rochester, N. Y.

HOW AMATEUR PHOTOGRAPHY HAS AFFECTED THE PROFESSIONAL PHOTOGRAPHER.

BY F. M. SUTCLIFFE.

IF we compare the best work which the amateur exhibits with that of the leading photographers to be seen in their shop windows and show cases, we find a great difference. The amateur's work has a greater refinement and infinitely more variety than that of the professional. There are, I know, exceptions to this rule in Glasgow, Edinburgh, and London, but the general run of the work of the best photographers might all be done by one and the same man. It would appear, therefore, that the amateur has not affected the quality of the work of the professional who is incapable of doing work like, say, that of Mrs. Barton or Mr. Cadby, to name two well-known amateurs, simply because his artistic powers have not developed. It would seem as if the professional had slept while the amateur had forged ahead.

Fifty or sixty years ago photographers had to be content with such results as they could get, and few photographers sought to improve the quality of their work by the study of either nature or pictures or engravings by good masters. Those who did so, often had nothing better than woodcuts to emulate; now, a woodcut, unless engraved with infinite patience and skill, is more likely than not to be a pernicious example to follow, for the block of wood which the engraver works on would print quite black if not engraved at all. Only by great skill

and much labor can gradation of tones be secured. The photographer who studied woodcuts in the hope of gaining knowledge might pick up something of composition and the value of lines, but he would be able to learn very little of tones and color-values. Then when woodcutting gave place to the process man, the productions of the latter were, and are, too often quite as false as woodcuts, for few process-block makers, in these islands at any rate, have had any artistic training, and seem to be incapable of even seeing when the tones of a picture are true or not. If the work of photographers, as seen in their shop windows, is so much alike, it would seem as if they either copied one another or sought their inspiration from the same source. There are other reasons for the similarity. Most studios are built after the same plan. Many photographers are always changing their operators, which latter go from place to place and carry their own ideas with them. Then, again, the backgrounds—generally after Reynolds—and furniture are very much alike all over the three kingdoms. Those who use artificial light use it at the same angle, while the amateur, as a rule, does not use painted backgrounds and his light is often either in the open-air or a window in his house.

Woe betide the professional who ventures to throw his sitters ever so little out of focus or to send proofs from any negatives which show the slightest sign of movement on the part of the sitter. Some of us can remember with what pleasure we looked forward to the arrival of a new portrait lens by Dallmeyer, which, by separating the front and back combinations, could be made to give diffusion of focus. We can also remember how it had to be screwed up again, for all the portraits which had diffusion came back quickly on to our hands, and we had either to replace them or return the money. It is said to be hard to cure a fool of his folly. Some photographers have even, with hard-won experience in their minds, tried again to persuade their customers to accept prints which were not excessively sharp. I remember one day giving the back of the portrait lens a few turns and getting a pleasing diffusion. The next morning I asked the operator where his negatives were. He coolly told me that not one of them was sharp, so he had thrown them all away! I remember being vexed at the time, but now I wish I could apologize to him, for he no doubt thought he was doing his duty in throwing away what he knew the sitters would refuse to have.

Perhaps one reason why the work of the amateur is so much better than that of the professional is that the sitters of the former have nothing to pay, and are content with simplicity, while the professional's customers want as much as ever they can get for their money. They will even accept, apparently with gratitude, such things as sprays of leaves and flowers all over their portraits with which some photographers embellish their works.—*Amateur Photographer.*

Mercurial Intensification.—Herr Geiger, of Munich, strongly recommends the use of a 1 per cent. solution of caustic soda to which a little formaline is added for blackening mercurial bleached negatives. The soda reduces the chlorides to oxide and the formaline reduces the latter to the metallic state. The particular formula which he recommends is:

Caustic soda	5 grs.
Formaline	10–15 mimins.
Water.....	1 oz.

Rodinal.—The normal strength of rodinal for development papers is 1 ounce to 20 ounces of water, plus 2½ grains of potassium bromide. Works well with all papers.

HYPO ELIMINATORS.

A great many substances have been suggested for destroying the hyposulphite left in prints and plates so as to curtail the necessary time of washing. Some of them are useful, others useless, whilst others again are worse than useless, being prejudicial to the image.

An important point in the destruction of the hypo is that it shall be converted into some harmless salt which shall be readily removed by water, or which shall be absolutely inert as regards the silver image. Further, the hypo eliminator itself shall be practically without action on the image.

These two conditions entirely place out of count the old remedies such as alum, chrome alum, and the hypochlorites. The two former because they decompose the hypo and give rise to sulphurous acid and other sulphur compounds which would immediately, or in time, attack the silver image; and the hypochlorites are barred because they contained chlorine compounds which act on the image at once, besides that, unless used very weak, they attack the gelatine itself.

Certain iodide compounds have also been suggested and introduced commercially but they are of very little practical value and like permanganate of potash are liable to attack the image. Permanganate can be used but it must be in a perfect neutral solution and neither an acid nor an alkaline fixing bath must have been employed. The great disadvantage with it, however, is the liability to brown stains, due to the formation of manganic oxides. It is essential to carefully adjust the quantity, so that taking all things into consideration we cannot recommend it.

The main feature to be kept in mind when choosing a hypo eliminator is that it should oxidize the hypo into a harmless salt such as sodium sulphate. Obviously then one should use a chemical which is rich in oxygen and ready to give it up on the slightest provocation. The chemicals which occur to one are naturally hydrogen peroxide, ammonium persulphate, and potassium percarbonate.

With regard to the first the chief disadvantages are its poor keeping power, especially when exposed to light, and the fact that it has a softening effect upon gelatine.

Ammonium persulphate is well known as a reducer for harsh negatives, but it can be used for hypo elimination provided care is taken not to use too strong a solution and make it alkaline. It is only in an acid condition that it attacks the image.

The best method of using it is to rinse the plate or print in running water for about two minutes, then squeegee well so as to remove as much water as possible and then immerse in

Ammonium persulphate	50 grains.
Water	10 ounces.
Liquid ammonia	39 drops.

About 2 ounces of this should be allowed for every 20 square inches, and the prints should be allowed to remain for five minutes, then washed for another five minutes and dried.

Even more efficacious than the above is a solution of potassium percarbonate. The plate or prints should be washed and squeegeed exactly as described above, and then placed in a clean dish and 5 grains of the percarbonate added for every quarter plate, and the dish well rocked. A slight effervescence will take place, and as soon as this has ceased the plate or print may be removed and washed for five minutes.

It is not advisable to keep the per-

carbonate in solution, and if an acid fixing bath has been used it is advisable to add an equal quantity of carbonate of soda and then proceed as above.

Possibly for commercial purposes, when large quantities of prints have to be turned out, the use of chemical hypo eliminators will not pay; but for a few prints, a dozen or so, there is not the slightest doubt there are advantages when the correct eliminator is properly used. It at least enables one, even if a chrome alum fixing bath be not used, to turn out a rough proof on a development paper in less than half an hour after the plate is fixed, for the negative can be easily dried off in spirit and by the heat of a fire.—*Photo Notes.*

FURTHER NOTES ON THE CARBON PROCESS.

BY A. H. HALL.

Carbon Prints with White Margins. I have worked the carbon process for some years, and have at various times experienced considerable difficulty in ensuring complete solubility for the tissue. Nothing is more annoying than to take a print from a negative that has been carefully masked, and to transfer it on to a large piece of paper with the intention of leaving a wide margin round the picture, and then to find on development that these margins show a distinct tint. I have latterly been sensitizing my tissue in a totally different way, and have succeeeded in eliminating this trouble completely, and, incidently, have found also several minor advantages in the method.

A New Method of Sensitizing Tissue. Briefly, the means adopted are as follows: A ten per cent. solution of either potassium or ammonium bichromate is made up, using hot water, and when cold the solution is filtered. To each ounce of it an ounce and a half of pure acetone is added. In the case of potassium bichromate, a quantity of crystals will be thrown down, but this makes no difference. A piece of tissue is then taken and pinned by its four corners to a stout piece of cardboard, a little of the solution is poured into the middle of the tissue, and is spread quickly and evenly over the whole surface with a broad camel-hair brush. The brushing is continued, backwards and forwards and up and down, until there is a tendency for the brush to stick. The tissue is then put into a cupboard away from the light, and it will be found dry and fit for printing in about fifteen minutes. A little practice will be required at first to make quite sure of coating the tissue evenly, but the method is really very easy and the knack will be acquired in a very short time. I use a 2-inch brush and about twenty minims of solution for a piece half-plate size, and find it quite easy to sensitize right up to the edges of the tissue. Care must be taken to start the brushing as soon as the solution touches the tissue, as otherwise the portion first wetted will absorb more than its due share of solution, and the print at this point will be of greater density than the surrounding parts. There is no difficulty in sensitizing tissue up to whole-plate size, and though I have not tried it for larger sizes myself, I should not hesitate to use this method for pieces as large as 12 inches by 10 inches.

Some Incidental Advantages. Besides ensuring the complete solubility of the tissue, the method has several other advantages. It is very annoying to a busy man, who has only the week-end

for printing, to sensitize a batch of carbon tissue overnight, and find the next day that from bad weather or any other cause the printing cannot be done. By the method just described, this difficulty is entirely overcome. No preparations are necessary until it is certain that a suitable day has been obtained. A dozen pieces can be sensitized in a very short time, and at a very small cost. With acetone at threepence an ounce, two and a half ounces of solution will cost less than sixpence, and be sufficient for about sixty half-plate pieces, *i. e.*, about ten for a penny.

Suiting the Tissue to the Negatives. It is easy by this method to take excellent prints off negatives that previously were considered far too thin for carbon printing. By using a minimum quantity of solution, the tissue is less deeply affected, and a more vigorous print is obtained; whilst for very hard negatives the operation of sensitizing may be performed a second time—that is, the normal quantity may be spread over the tissue, and, without waiting, a second portion poured on and brushed over as before. This is easier than pouring on a double quantity of solution in the first instance. Ammonium bichromate seems to give rather more contrast than the potassium salt, whilst a weaker solution appears to have a slight tendency in the same direction; but so far I have not experimented with anything weaker than about three per cent. By this method, I have never had occasion to keep the tissue for any length of time, but after two days the prints developed up clean and bright. I have tried holding the damp tissue in front of a fire to hasten the drying, until the coating was on the point of melting, and until the surface appeared distinctly shiny, but with no ill-effects.

The Sensitiveness of such Tissue. The exposure required is not more than would be given with tissue sensitized in the ordinary manner; and I have found the tissue keep the fine detail well. It is also notable that it will stand treating with plenty of hot water in development, which is not the case when brush sensitizing is used with a mixture of ammonium bichromate, sodium carbonate, and wood alcohol, as is sometimes advocated.

The Use of Ancient Tissue. During the course of the last twelve years I have accumulated a considerable stock of tissues, and in some cases I have found that by ordinary treatment the older batches were apparently useless, yielding nothing but foggy prints. By the method just described, the prints developed as clear and bright as if the tissue had been but recently bought.

The Preparation of Single Transfer Papers. This has caused me some trouble in the past, and for several years I came to the conclusion that it was better in the long run to buy the paper ready prepared. Latterly, however, I have used the sizing solution sold by the Ozotype Co. with very good results. This is doubtless similar to the mixture recommended by Mr. Roberts, and is very easy and convenient to use. A ten ounce bottle can be purchased for a shilling, and will coat a very large surface of paper. I have rather a weakness for prints on Whatman paper, and for half-plate size. Instead of buying the paper in large sheets, I have obtained the 7 x 5 inch solid sketching blocks of this paper, manufactured by Winsor and Newton. It takes only a few seconds to rub the solution into the surface of the top sheet, to strip this off, and proceed with the next, and so on. There are thirty-two sheets in a shilling block, so that the method is quite economical. This way seems to me to entail less trouble than pinning down a full sheet, coating it, and cutting it up. The prints dry with rather less glaze in the

shadows than when the commercially coated paper is used.

Transferring to Rough Papers. There is no doubt that rough papers are more difficult to use than those with a smooth surface, and that prints on them require more care in handling. For such prints I consider that a safe edge is essential, whilst to ensure good contact and freedom from air-bells, the method recommended by the Autotype Co. is the simplest. The transfer paper is soaked for an hour or so in cold water, transferred for a few minutes to water at about 150° F., again immersed in cold water, lifted out, laid on a sheet of plate glass, and flooded all over with cold water. The tissue, after soaking, is placed face downward on it and squeegeed into contact. In my own work I take the printed tissue out of the water as soon as it is limp, and before it is completely flattened out, and after squeegeeing expect to find that it will cause the transfer paper to bend outward considerably and not lie flat unless pressed under a weight. The squeegeeing is best done direct on the back of the tissue. The surplus water being swept off, considerable pressure may be exerted, until the grain of the support shows through the back of the tissue. Better contact is obtained if there is no pad between the print and the squeegee, and if some of the backing paper is rubbed up by the squeegee no harm is done.

Remedying Over-exposure of Carbon Tissue. A much over-exposed print is useless and should be thrown away, but if the over-exposure is not too great the most direct method of remedying it is the best, namely, to soak the print face downward for half an hour or more in water kept at a temperature of about 120° F. This is tedious, but often very effective, but the prints must have constant attention to detect the first sign of blisters forming. If blisters do form the print should be immediately immersed in alum, rinsed, and the blisters carefully punctured with a needle to let the imprisoned air escape; they are then painted over with alcohol by means of a small brush. The alcohol causes the gelatin to contract, and, if care is used, the blisters will be invisible, practically, on the finished print. Another method that is fairly efficacious is to add a few crystals of ammonium sulphocyanide to the washing water. This is not nearly so apt to cause frilling as the addition of washing soda or ammonia, though, in any case, an attempt to make a *large* reduction of density is rarely successful, and in such circumstances a fresh print should be made.—*Photography.*

NIGHT PHOTOGRAPHY.*

NIGHT photography! How absurd! Such might have been the remark some years ago when photographic plates were slow, as well as most other things. Even now, in the days of the quick plate, the man who photographs at night is looked upon as worse than absurd, or, as I have often been called in Scotland, "daft a wee." Of course such *encouraging* remarks fall like rain upon a duck's back once one gets interested and enthusiastic in the work.

Although exposures at night have not yet reached the snap-shotting stage, and with no intention of a "bull" "we live in hope of seeing that day," they are by no means lengthy, thanks to the rapid strides made in the production of fast plates. What the future holds in store for us as regards quick exposures de-

* A paper read before the Edinburgh Photographic Society, by Mr. Robert Dykes.

pends very much upon the skill of the lens maker and plate manufacturer.

It is held by some photographers that night photography has few pictorial possibilities. To a certain extent this is so; for of the one thousand and one subjects by day we have perhaps only one that may be suitable by night. Then again, night work does not permit of the drastic treatment evidently meted out to some of the daylight productions seen at exhibitions. The lighting is so different, high lights and shadows being much more difficult to handle. One cannot take this or that out and put something else in its place very easily, because the slightest sign of faking is distinctly noticeable upon the negative. What one aims at in pure "night-scapes" is a clean, correctly exposed, and properly developed negative with the shadows almost clear glass but full of detail, and the high lights moderately dense but free from any pronounced halation. With such a negative one can print by contact or enlarge, and according to the process employed subdue the detail if desirable.

Granted that night work has few pictorial possibilities, it yet has a charm all its own. Photographing in a large city at night, for it is largely "city-scapes" we draw upon, we see it in quite a different light. What during the day is a busy, noisy, uninteresting street is now quiet, almost deserted, with fine clumps of heavy dark shadows, emphasized here and there, where a street lamp throws its reflections over the pavement. Without a thought of photography or any other art, finding ourselves in such a street, our first desire might be to find ourselves out of it again. It is a regrettable fact that many of us think very little about the artistic or romantic side of a city by night. After the day's work is done the first consideration is how to get home in the quickest manner possible—much the same way as some people take photographs—and when at home to stay there. It is quite a common mistake, and at the same time I think a sinful one, to imagine that it is only the vulgar and the low who haunt the streets of a great city by night. Certainly night is the only time many of the lower classes have the opportunity of getting the fresh air, and there may be a little social difference between Bond Street in the afternoon and Bond Street at night. It is an old saying that "one-half of the world knows not how the other half lives," and it is my humble opinion that the former half do not want to know.

If darkness were absolute at night then photography might be out of the question except by flash-light, about which it is not my intention to speak, so much having already been written about the subject. All the year round there is no time of the night that is perfectly dark from a photographic point of view. There is always a certain amount of actinic light energy even out in the open country away from all apparent life, with no sign of an artificial light. I do not think on the darkest of nights—once our eyes become accustomed to it—can we feel absolute blackness. The hedges, trees by the roadside, all loom up from the darkness of shadow to the darkness of an inky sky, yet they are still discernible. Now, if the eye can discern objects at night, it is obvious that the more sensitive lens and photographic plate will do so, and at the same time, it is a remarkable fact, pick up and record many things that the eye could not see. If objects are discernible in the open country at night, how much more so must they be even on a very dark night in the city where lights from thousands of different sources brighten up the darkness, and are reflected back from the sky, giving a diffused light of great value for picking up the detail in the shadows. Then again, on a clear

moonlight night, we have a wealth of soft light that is so highly actinic that even in December it is easy to over-expose and get a daylight effect.

Night photography is dependent then upon the amount of actinic light available at night, and this may be only the one 25,000th part of that obtainable at mid-day for an open *city* view, in other words the 25th of a second with F. 11 would become fifteen minutes with the same stop at midnight. But the pictorial aspect of the work lies not in the direction of light, but in the proper handling of the shadows; it is the soft, mysterious, suggestive shadows set off by a little light here and there that appeal to the imagination.

I am not certain when night photography was first attempted, but some of the earliest successful results were obtained by Mr. Paul Martin in 1896 and 1897, followed by such workers at Fraser, Heyl, Ryan, Motteram, Yellott, Prescott Adamson, M'Corkle (*The Photo-Miniature*, No. 31), Lambert, Hunt, and others, all of whom have contributed some of the finest specimens of this class of work that one could wish to see.

Coming now to the question of what to photograph at night, the "bill of fare" is both large and varied, far more so than one would at first imagine. Excluding flash-light work about which, as I mentioned before, it is not my intention to speak, I cannot do better than treat each subject separately, taking, perhaps, the more scientific matter first, and, therefore, I will begin with—

Lightning. Photographing lightning flashes by night is a comparatively simple matter. A quick plate, well backed, the camera set to infinity, and one stop inserted. The camera is then levelled in the direction of the prevailing flashes, the lens uncapped when it is expected that a forked flash is likely to occur, sheet lightning only fogging the plate; and as soon as it is certain a flash has been obtained, the lens capped and the plate changed. I would strongly recommend that a series of flashes be not taken on one plate, or fogging and reversal will be the result. Do not stop down the lens if the flashes are distant and faint.

Skiagraphs. I mention skiagraphs here because they are neither daylight or night productions, but simply photographic impressions obtained by means of radio-active bodies. It has been shown that nearly all substances give off emanations that are capable of affecting a photographic plate. A piece of freshly planed wood if placed upon a rapid plate in absolute darkness for a day or so and the plate developed, will give a beautiful photographic impression of the structure of the wood. Nearly all the metals act the same way, and many other bodies, of which radium, as we know, stands at the top.

Firework Displays. Much like the lightning flashes, all that one can do is to use a rapid plate well backed. Choose a suitable point of view out of the crowd, carefully focus, put in one stop, and if the display lasts no longer than twenty minutes expose the whole time. If longer, take the cap off and on, and record simply those fireworks that you want. It is no use overcrowding the plate with them, and, if the display be long, it is better to expose two plates, changing at half-time. Choice of position for photographing is the principal and most difficult problem, as just when you are all ready, or rather the fireworks are all ready to go off, *you have to* instead, owing to the number of big heads that have suddenly bobbed up between the camera and the display.

Illuminations. Very like firework displays, the difficulty is where to get a place free from the crowd. Illuminated buildings such as one sees at exhibitions make fairly good photographs, but there is too much symmetry, too much design,

to make them really pictorial. A common mistake in photographing illuminations is to under-expose, some little detail behind the lights is essential; one does not care to see simply rows upon rows of fairy lamps with almost nothing to support them. Using a rapid plate and stop F.11 an exposure of at least twenty minutes should be given. Each little lamp is really not very actinic and taken individually would not have much effect upon the photographic plate.

Conflagrations. When one gets the opportunity of photographing a large fire it should be taken. A quick plate and as full an aperture as possible will allow of an exposure being made of from three to ten minutes, according to light, and providing the aperture be not more than F.8. Besides the actual conflagration itself, there are many little bits here and there, such as the steamers, etc.

Iron Foundries and Blast Furnaces. Unless worked in conjunction with the flash-light these kind of subjects are of very little use. So much of the light given off is red or yellow, with more heat rays than actinic rays, that to obtain a good photograph it is necessary to use a flash-light, carefully arranged so that the shadows fall with the furnace lights. Distant views are not very interesting, but may be taken much the same as ordinary street scenes.

Store Fronts. Large stores, well lighted, cannot be said to make pictures, but looking at it from an advertisement point of view it is a wonder some firms do not have their premises photographed at night when fully lighted up. With a rapid plate and F.16, an exposure of ten to fifteen minutes would suffice.

Street Photography. This is perhaps the most fascinating form of night photography—little bits of street corner with a church steeple or perhaps a statue sharply silhouetted against the sky or some high light. The exposure will vary from half an hour for a close view with few lights to fifteen minutes for an open view such as a large square, using F.11 and a rapid plate.

In wet weather the streets in places look their best, lights scintillate bright and clear out of the darkness and cast their reflections over the pavements. Under such conditions five minutes may be knocked off the exposure.

(*To be continued.*)

THE HIGHEST STACK IN AMERICA.

[THE following interesting clipping from the *Kodak Trade Circular* is an excellent testimonial to the thoroughness with which the Eastman Kodak Co. takes up a problem which will enable them to maintain or improve the high standard of their products.—ED. W. P. M.]

We have just erected at Kodak Park a smoke stack which has some unique features, one of which is that it is the highest in America.

The necessity for this great stack arose from the thoroughness with which we go into details in the manufacture of Kodak Film. To make a perfect film, perfect basic materials are necessary. Experience taught us that the only *sure way* to get these basic materials right was to make them ourselves. We do not buy nitrate of silver; we buy silver bullion and nitrate it ourselves. For this purpose we not only make the nitric acid with which the silver is nitrated, but we go back of that and make the sulphuric acid from which, in combination with nitre, the nitric acid is made. Likewise this nitric acid is used for cutting

the cotton used in making the film base.

This stack then is simply typical of the thoroughness—typical of the lengths to which we go in reaching perfection in every department of our film plant. Years of experience, ready access to the formulæ and methods of the best plate makers in the world, special machinery and special buildings at no matter what cost—all these are at the command of our film makers; all of which accounts for the fact that we are years ahead of any competitor in the turning out of film; accounts for the fact that Kodak film is the only film rated by experts as equalling in speed the Seed 27 plate.

But this article was to tell about the stack. The figures are interesting. In the first place, it is 366 feet in height, the highest stack in America, and it rests on an octagon foundation which is 23 feet deep to bed rock, is 40 feet across the flat sides of octagon at base and 30 feet at top. The base contains approximately 23,000 cubic feet of concrete and weighs 1600 tons. The chimney proper is a round shaft built of hollow radial brick. The outside diameter at the bottom is 28 feet and at the top is 11 feet. The inside diameter at the bottom is 19 feet and at the top 9 feet. It is lined on the inside with acid-proof brick and cement 4 inches thick, leaving a two-inch air space. The lining is laid in sections 20 feet high, supported on corbels from the stack. The smoke opening is 6 x 12 feet, providing for 2400 horse-power boilers, and the acid fume inlet, 4 feet x 4 feet, is for sucking away the acid fumes from the chemical manufacturing departments. The bricks used in stack are radial in shape and have hollow air spaces perforated in them. They are about 5 inches high and 6½ inch face. The length of the bricks varies from 10½ inches long to 4½ inches; there being five different lengths used. The stack is provided with lightning rod having four carbon points and is equipped with an iron ladder on the inside and one outside. The total weight of the stack is about 3200 tons.

The letters "KODAK" on the stack are 7 feet 3 inches high, and are spaced 9 feet 9 inches centre to centre, the bottom of the lower K being 204 and top of the top K being 250 feet above top of foundation.

NEWS OF THE CONVENTIONS.

Photographers' Association of Illinois. The Ninth Annual Convention of this Association was held at the Palmer House, Chicago, May 6, 7, 8, and 9, 1907.

The session was called to order by President S. W. Stout. After a few general remarks President Stout announced that he wished his formal address to go over for a day, setting Wednesday at 9.00 A.M. as the time for same. President Stout appointed the following judges to pass upon and award prizes in the different competing classes of pictures: Geo. J. Parrott, Ft. Wayne, Ind.; J. M. Bandtel, Milwaukee, Wis.; E. E. Doty, Belding, Mich.

Wednesday morning at 9.00 o'clock the second session was called to order by President Stout. After a few minor details had been adjusted, President Stout took the floor and formally addressed the assembly. That the welfare and prosperity of the Illinois Association has been one of the president's greatest cares was vividly shown by the thorough manner in which every detail was handled during his administration. The earnestness with which he appealed to

the members for their future support in extending the influence of the Illinois Association, when he would no longer have the pleasure of being president, was a literary effort delivered in a most eloquent manner. The entire address showed how deep at heart Mr. Stout carried the interests of the Association, and in conclusion he thanked every member for his or her kind coöperation in making the Ninth Annual Convention such a rousing success.

The regular order of the program was then taken up, and Mr. R. H. Mann took the floor and delivered a most excellent and instructive talk on "Retouching." For the information of those who did or did not have the pleasure of listening to this most interesting talk, it may be said that Mr. Mann has been in the photographic business for thirty-five years and never allows anyone else to retouch his negatives. This alone shows the great experience in retouching Mr. Mann has had. His talk was not only interesting but very pleasant to listen to, as it was interspersed with bits of humor which caused much merriment in the audience. Mr. Mann brought out many points which were of great interest to photographers in regard both as to retouching and business methods in handling customers.

Mr. F. Dundas Todd made the announcement that this would be his last convention, as he is about to retire to a Western country and sever all his connections with his former literary work regarding photography. He also announced that he was receiving subscriptions of one dollar from all photographers for a memorial plate to be placed on the grave of the late James Inglis, as a token of affection and gratitude for all the benefits James Inglis gave to the photographic profession.

Thursday A.M., at 9.00 o'clock, the third session was called to order.

The reports of the judges were received, and the following awards announced:

Grand Portrait Class: Silver loving-cup, W. S. Lively, McMinnville, Tenn.

Class A: Gold medal, M. H. Sykes, Chicago, Ill.; silver medal, W. L. Koehne, Chicago, Ill.

Class B: Gold medal, E. E. Godfrey, Waukegan, Ill.; silver medal, M. R. Moran, Canton, Ill.

Class C: Gold medal, N. S. Godfrey, Abingdon, Ill.; silver medal, R. A. Heath, Pontiac, Ill.

Class L–M: Silver vase, R. A. Heath, Pontiac, Ill.; bronze vase, George C. Blakeslee, Rock Island, Ill.

Cabinet Class: Gold medal, George C. Blakeslee, Rock Island, Ill.; silver medal, Mrs. M. H. Cole, Ottawa, Ill.

Miniature Class: No award, as ratings did not reach 70 per cent.

Special Class (one award only): Gold medal, E. C. Pratt, Aurora, Ill.

Imperial Plate Class: Silver loving cup, The Wallinger Co., Chicago, Ill.

The following officers were nominated for the ensuing year by the committee, and unanimously elected:

President, Chas. E. Jay, Paris, Ill.; First Vice-President, H. B. Medlar, Woodstock, Ill.; Second Vice-President, C. J. Erickson, Dixon, Ill.; Secretary, Geo. Stafford, Chicago, Ill.; Treasurer, R. H. Mann, Virginia, Ill.

The secretary made the following report: Number of members registered, 135. Receipts to date, $1246.25; expense to date $1,012.33; cash on hand, $233.92; outstanding accounts, $135.00.

Joliet was selected as the meeting place for 1908.

W. C. GRABER,
Secretary.

The Photographers' Association of Iowa held their Seventeenth Annual Convention at Cedar Rapids, April 9th, 10th, 11th, and 12th, with the largest attendance and proved to be one of the

most successful meetings in the history of the association. The exhibits were many and of very high class. The awards were as follows:

Medlar Trophy: H. M. Anschutz, Keokuk. Grand Portrait (open to all photographers outside the State): Doty Studio, Belding, Mich. Class A: 1st, Chas. Townsend, Des Moines. Class B: 1st, C. H. Gilbert, Independence. Class C: 1st, Chas. Wilkinson, Tama. Class D: 1st, J. Fritsch, Garner. Miniature Class: 1st, L. M. Reid, Ottumwa.

Eight pictures were selected for exhibit at the Daguerre Memorial Institute, at Winona Lake, Ind. (one photo each from the following): H. E. Voiland, Albia; H. M. Anschutz, Keokuk; J. B. Hostetler, Davenport; O. C. Courtright, Ft. Madison; C. H. Gilbert, Independence; Chas. Townsend, Des Moines; Doty Studio, Belding, Mich.; R. C. Nelson, Hastings, Neb.

Davenport was selected as the next place of meeting, in 1908, where we are looking forward to a still better convention, since our Executive Board are hustlers and men of convention experience. The lectures and talks by members show that Iowa photographers are enthusiastic to accomplish things for the betterment of photographers and the uplifting of our profession.

The address by M. J. Tritz, of Waterloo, was surely an incentive for any photographer to put a high estimate upon his work and profession. J. F. Specht, of Maringo, talked upon price-cutting and experience with ticket-grafters, that was intensely interesting.

Mr. Alexander Runyon, of Vinton, delivered a very instructive address on "Art Photography as compared with Paintings by the Old Masters." The talk was illustrated with 14 x 17 bromide reproductions of famous paintings; the lecture was one of the most interesting features of the convention, and we trust it may be published in full in the near future.

The Association is very grateful indeed to Messrs. Holden and Holloway for valuable assistance and their impartial decisions in judging the exhibits. Mr. Holloway told of and exhibited a diamond medal to be awarded to any photographer outside the State of Indiana exhibiting the best photo at the Winona Lake, Ind., convention July 8 to 12.

We have but briefly outlined what was done in the business sessions of the forenoons. The afternoons were given over to the manufacturers and dealers. Tuesday afternoon, 1.30 to 2.30, N. A. Corning, of the Hammer Dry Plate Co., gave a demonstration at the L. A. Reid Studio, showing novel effects in lighting with the Tomlinson new light controller; the attendance was large and appreciative. From 2.30 to 3.30, Mr. Gagnon, with the Cramer Dry Plate Co., gave a demonstration at the studio of T. Will Runkle, which was well attended. The American Aristo Co. gave continuous demonstrations from 1.30 to 5.00 each afternoon, under the direction of Mr. W. H. Allen. Negatives were made by H. A. Collings and A. C. Novice under the aristo lamp, using Seed plates. Messrs. Miller, Wentz, and others of the Eastman Co. gave demonstrations on bromide paper, dry mounting tissue, etc.

The following officers were elected for the ensuing year:

President, G. E. Fahr, Bonaparte; 1st Vice-President, M. J. Tritz, Waterloo; 2d Vice-President, H. E. Voiland, Albia; Treasurer, W. W. Ferguson, Denison; Secretary, T. Will Runkle, Cedar Rapids.

G. E. Fohr,
Secretary.

Photographers' Association of Indiana, Winona Lake, July 8 to 12. J. F. Cady, Boonville, Ind., Secretary.

Photographers' Association of America, Dayton, Ohio, August 6 to 9. Frank B. Medlar, Spencer, Ill., Secretary.

Photographers' Association of New England, Boston, Mass., August 26 to 28, Geo. H. Hastings, Haverhill, Mass., Secretary. This Association is offering a solid gold medal as a Grand Prize, open to the world (portraits). Write for particulars.

Photographers' Association of Carolinas and Virginia, Jamestown, Va., October 1 to 4. C. E. Cheyne, Hampton, Va., Secretary. This offers an opportunity to see the Jamestown Exposition.

Safe Flashlight. The *Photographische Rundschau* states that a perfectly safe and non-explosive flashlight mixture can be obtained by mixing equal parts of magnesium powder and anhydrous chrome alum. This burns rapidly and gives a good light, whilst a slower burning mixture is obtained by mixing the above with one-fifth its weight of infusorial earth or powdered glass. As flashlight mixtures can be obtained at very reasonable prices now, it is hardly worth while mixing them, as a great deal of their efficacy depends upon intimate mixing and freedom of the magnesium from oxidation, to which, when it is kept in the ordinary way, it is very liable.

TRADE NOTES.

A New Graflex Camera.—The Folmer & Schwing Co., of Rochester, announce a new Graflex, which is called the Press Graflex, and which, as the name implies, is designed for the press photographer.

The Press Graflex is made in the 5 x 7 size only, and is of the non-reversible type. It is fitted with two tripod screw plates and may be used on a tripod in either a horizontal or vertical position. The telescopic side-arms are made long enough to give 15-in. focal capacity, and the new Press Focal-plane Shutter which carries the curtain roller back of the focal plane allows this camera to accommodate lenses of from 7-in. to 14-in. equivalent focus, permitting of a wide range of lenses for fine situations or the use of long focus lenses for track or field work. The minimum focus of lens which the Press Graflex will take is 7 in.

The tension roller is operated by a clock spring, which may be speeded up to 1-1500th part of a second, or lowered to 1-5th of a second. Slow instantaneous exposures can be made by setting the curtain aperture index at "0," handling the camera the same as for regular instantaneous work, as the mirror opens the exposure as it swings upward out of the cone of light, automatically tripping the curtain, which terminates the exposure. Time exposures of any duration can also be made.

The focusing hood is large and spacious, giving a full view of the field, with a complete eye shield fitting the contour of the face, permitting the operator to view the image on the focusing screen, right side up, with the greatest of ease.

The camera is opened ready for focusing by pressing a small lever placed near the end of the handle, conveniently near the right thumb, when carrying the camera. The cover operating the focusing hood is likewise opened automatically, and the construction of this cover is such that the camera may be carried ready for use while it is open.

The price of the camera without lens is $110. A complete descriptive price list will be mailed on request.

Few photographers realize the enormous and steadily increasing amount of business that is being done in picture postals. There are immense profits in the business and the photographer will do well to read carefully the advertisement elsewhere in this issue of the American Photo Colortype Co., of Chicago, who have facilities for making the highest grade cards at most attractive prices. Look through your view negatives and you will find plenty of subjects that reproduced at $3.50 per thousand will sell well and bring in a very considerable profit.

The Chicago Photo Scenic Co., of 140 Dearborn St., Chicago, have just issued a new catalogue of their Riverside Backgrounds. It is one of the most interesting and extensive background catalogues we have yet seen. Ranging from simple head grounds to large magnificent interiors, there are grounds for every possible occasion and every class of studio. The designs are thoroughly artistic and well carried out It

is a catalogue we would recommend the photographer to have on hand to consult when in the market for new backgrounds. A copy can be had from the company on request.

THE UNITED PHOTO MATERIALS CO., of Lewiston, Maine, propose to make and sell dry plates for the photographer on a coöperative plan that should meet with much success. By placing a small deposit with the company the photographer becomes in a measure his own factory owner and participates in its profits. The plates are made and shipped direct to the consumer—thus ensuring a supply of freshly coated plates. Their quality is guaranteed by the fact that Mr. Ross, formerly of the Standard and Stanley Companies, will be in charge of the factory. Mr. C. O. Lovell, of the Lovell Dry Plate Co., will be in charge of the Boston office at 48 Summer St. We understand that an office will be established in New York later.

PROBUS PRESERVATIVE PAINT has more uses than we can find space to mention. It is one of the most useful things the photographer can have in his workroom, and is as indispensable as the camera in the studio. It is a paint that will render sinks and trays impervious to the action of acids and alkalies, and can be put to a thousand and one uses. A plate-box cover after a coating of *Probus* becomes a first-class water and acid-proof tray. The thousand other uses for the paint will suggest themselves. It comes in pint, quart, and half gallon cans, at 65c., $1.00, and $1.65 respectively. George Murphy, Inc., New York, are trade agents. Descriptive circulars on request.

THE ROYAL CARBIDE LAMP, just placed on the market by Geo. Murphy, Inc., is a very handy form of the portable dark-room developing and printing lamp with several advantages. Using calcium-carbide, which can be procured anywhere cheaper than oil or gas, a steady white flame of fifteen candlepower is produced. By the simple addition of water to the carbide carried in the lamp you have a light lasting six hours, giving off no heat or smell and absorbing no oxygen from the air in the dark-room. The Royal Carbide Lamp is converted into a good printing light by the removal of the ruby chimney. For the travelling photographer or the small darkroom it is invaluable and will become a great favorite. The lamp with materials for six hours' use costs only $1.50; postage, 25 cents extra. Additional carbide costs 25 cents per lb.

A NON-SLIPPING PRINTING FRAME is another novelty introduced by George Murphy, Inc. It is a frame with non-slipping device that absolutely prevents the print from moving after being placed in the frame, a complaint too often heard against the old style printing frame. Well made of seasoned ash it will last a lifetime and never draw a "swear word." 4 x 5 size now ready, price 38 cents; other sizes in preparation. Try them and you will use no other.

"THAT BROWN BOX WITH THE RED LABEL"—the outward covering for the Imperial S. S. Plate, imported and sold in this country by G. Gennert—is rapidly getting itself well and favorably known; extra fast, they yield crisp, clean negatives full of gradation and are free from fog. They are deservedly popular.

EDITOR'S TABLE.

WE wish to draw special attention to an announcement of a novel photographic advertising contest open to professional photographers only. The Eastman Kodak Company offer two prizes—one for one thousand dollars and a second prize of five hundred dollars, both cash—for the best photographs for advertising purposes. Every photographer operating a studio would do well to study the conditions of this unique contest and make up his mind to get one of the prizes. Every photographer has an equal chance, and the man with the best idea will get the prize whether he is from Tombstone, Arizona, or New York City. The prizes are big and are worth a big effort.

You will find the announcement elsewhere in this issue. Read it carefully and start in.

IN the June issue of the *Photo Beacon*, Mr. F. Dundas Todd announces his partial retirement from the photographic field and the suppression of the *Photo Beacon*—which we understand has been merged with the *American Amateur Photographer* and the *Camera and Dark-Room*—truly a useful combination, a beacon in a dark room. For many years the guide, philosopher, and friend of all sorts and conditions of photographers, his sage advice and genial personality will be missed from the editorial page and convention hall. Mr. Todd is obeying the call of nature and going back to a life in the open air and the sunshine. We hope he will find a land overflowing with milk and honey and a full share of health and happiness.

ANOTHER change in the photographic world took place when Wilfred A. French, Ph.D., took over the ownership and became the editor and proprietor of the *Photo Era*—that *organ de luxe* of photographic art. Mr. French's many years of photographic experience, his artistic temperament, and his travelled culture thoroughly qualify

him for carrying on the tradition of our esteemed contemporary.

THE Royal Photographic Society of Great Britain will hold its fifty-second annual exhibition in London, September 19 to October 26, and invites entries from American photographers. The Sections comprise Pictorial; Scientific and Technical; Professional and Commercial Photography, and Photographic Apparatus. Medals are offered in the Scientific and Technical Section only. We have a supply of entry forms, prospectuses, etc., which we will be glad to mail to photographers interested.

THE BAUSCH & LOMB OPTICAL CO. have just issued in *The Prism; a Little Magazine Concerning that World of Wonder and Beauty Revealed by the Lens*—one of the daintest little magazines we have yet seen, measuring 3½ by 4½, printed on handmade paper, with illuminated capitals, sepia-tone frontispiece, and with a cover in three colors and gold, it is a beautiful example of the printer's art. Its contents describe in an interesting manner the varied uses of the products of this famous optical house. We understand that the magazine will be issued monthly and will be sent free to those interested. A postal card to Bausch & Lomb, Rochester, will secure a copy. We look forward to future issues with much pleasure.

THE STEBBINS CEMENT SINK.—In our description of this cement sink in our May issue we find that the dimensions for the mould were just one-half too small. The finished sink should be two inches thick and not one inch as given. Mr. Stebbins reports that the idea has created much interest, judging from the correspondence he has had on the subject.

THE AMERICAN ANNUAL OF PHOTOGRAPHY, 1908. Tennant & Ward, of New York, advise us that they have taken over the publication of the well-known *American Annual of Photography* from its former owners, and are now busy with the preparation of the 1908 volume, which will be edited by John A. Tennant. Good as the *Annual* has been in past years, the new owners desire to make the 1908 issue better than ever—more useful in its information and more attractive in its illustrations. In this they ask the coöperation of all photographers in the shape of articles dealing with photographic experiences or pictorial work of unusual interest. Correspondence or contributions for the *Annual* should be addressed to the Editor of *The American Annual*, Tennant and Ward, 287 Fourth Avenue, New York. As the book is made up during the summer months, contributors are urged to send their articles or pictures with as little delay as possible.

SOUVENIR POST CARDS. The following clipping from the *Chicago Tribune* is another indication of the growing demand for picture postals. As pointed out in our April issue, there is much profit in this business for the wide-awake photographer.

"The widespread interest in the souvenir post card industry is illustrated every day by observation of the crowd to be seen in front of every window where such things are exhibited or in the stores at the post card counters. It is evident that millions are being printed, and the presumption is that millions are being sold. Every summer resort or place of scenic or historic interest has its special cards. Many hotels furnish a menu card which has a perforated card attached. Restaurants and other places of business give them out as advertisements, and thousands of people collect them as others do postage stamps or coins.

It has been found necessary to make a number of special regulations. There has to be some supervision so that improperly suggestive cards may not be mailed. The postal authorities have recently issued an order limiting the size of the cards, prohibiting the use of those which are folded, and particularly condemning those which are covered with bits of glass or mica, from which carriers in several cities have received wounds which have threatened blood poisoning.

It would be interesting to know how the revenues of the postoffice and the volume of the mail have been increased by the development of the souvenir post card business. There is little doubt that large figures would be needed. It is quite likely, too, that the decision of the postoffice department to issue stamp books containing twenty-four one-cent stamps, these to retail for a quarter, is connected with the increased demand for stamps of this denomination for use on the post cards. Post cards will be popular for a long time, notably in connection with the better class of cards which show pictures of famous places, persons, or scenes. Many travellers have taken pleasure in sending a word of greeting to distant friends through the medium of a post card who would not attempt the more tedious task of writing letters to all whom they might wish to remember."

WE have received a copy of the Constitution of the Photographers' Society of New York, as amended at the third annual meeting, April, 1907—published by *The Photographer*. This is in many ways a model constitution and is well worth careful study by photographers who are interested in their conventions. Copies can be had free from the office of *The Photographer*, 76 Fifth Avenue, New York.

A MONTANA reply to Sidney Allan's "Open Letter."—A letter from Edgar Hagell, of Stockett, Mont., contained the following interesting postscript: "I received *Wilson's* for June yesterday. I always lay off for two hours to read some of it as soon as the magazine is received. Sidney Allan's articles, as a rule, are very interesting to me, but in my opinion he is off his base this time. I read your account of the New York Convention over and over again, and would have given anything to have been there, and would willingly chip in with Mr. Core to see such successful men operate in their studios—that alone would have satisfied me if I could have spared the time to get to New York."

By O. C. Conkling, St. Louis, Mo.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

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THE NATIONAL CONVENTION AND WHAT TO DO THERE.

BY THE ASSOCIATE EDITOR.

PROFESSIONAL photographers all over the country will be making preparations to attend the National Convention, at Dayton, Ohio, August 6 to 9 inclusive. How many of them will start out in much the same spirit as the ladies start out on a bargain day expedition? With a vague notion that by going to the convention they are doing the right thing and that, anyhow, they are going to have a good time and may possibly pick up a good idea or two.

To many photographers the closing of their galleries and the expenses incidental to attendance at a convention are quite an item in the year's expenses. It should be an investment which, properly managed, will yield a good return.

The practical and wideawake photographer will have made a memorandum of the things he wishes to find out about at the Convention—the new camera or lens, a printing lamp, a card index system, or he wishes to find out how certain business methods are worked in other parts of the country. With these points clearly in mind he starts out for the Convention and systematically seeks the information he has come for. Having successfully accomplished these objects and made sure of a good return on his investment—expenses, loss of time, etc., he is at liberty to enter into the spirit of the Convention, look up old friends and make new ones; study and enjoy the picture exhibit; spend time with the dealer in examining all that is new in apparatus and supplies, and incidentally have an all-round good time.

A point that is too often overlooked by the average man who attends conventions is the fact that he himself is a part of the convention and quite as necessary to its success as the weakest link is to a strong chain. A convention is "a formal or stated gathering of persons for some specific purpose—*especially a meeting for discussion or concerted action.*"

It is not an affair gotten up by the officers and run for their special benefit The officers are the servants of the Association and are there to run the Convention as directed by its members.

Many questions of vital importance to the photographers in general will be brought forward and can only be satisfactorily disposed of by the cooperation of every member of the Association.

It should not be left to the officers of the Association to decide the questions that so deeply effect all the members.

Much discontent has been voiced in the magazines lately on the rating and method of judging pictures offered in competition. We hope that the photographers who have criticized so freely will be as ready with their suggestions for the betterment of the present conditions. These men are well known and respected in the profession and they will be expected to come forward with their ideas on this subject.

The National Academy idea will be brought forward again and needs the careful consideration of every photographer. Any hasty or ill-advised action on the part of a small but interested body of photographers will do vastly more harm than good and may heap ridicule upon the whole profession.

Another question that affects the profession as a whole, and which, in the event of its being brought forward will need much more discussion and publicity than it has yet received, is the Daguerre Memorial. That Daguerre be honored and his memory kept perpetually green by the photographers is an object worthy of the greatest praise and hearty coöperation. Such a memorial to carry weight with the living and add dignity to the memory of the dead must be truly national in character. No body of photographers from any one State, even when connected with such an institution, can arrogate to themselves the distribution of the "highest honors possible in photography" in the shape of "diamond medals" and "certificates of special distinction." Such claims can only excite unfavorable comments.

Many other questions of equal importance to the profession will be brought forward and we would urge each and every photographer in attendance at the Convention to take an active and intelligent part in the discussions. This is his duty to his profession and is only equalled by his duty to himself in getting all the help and encouragement for the numerous other features which the Convention offers.

ON THE FADING OF PHOTOGRAPHS.

BY A. J. JARMAN.

THE cause of fading in photographic prints can be traced to a number of sources, one well-known source being the imperfect elimination of the fixing agent in the case of silver prints. Hyposulphite of soda as a salt is very soluble in water in almost any proportion, moderate washing of the prints in several changes of water will rid the prints of this salt; but the chemical that is formed by the hyposulphite of soda acting upon the organic compounds of silver is not got rid of so easily. This salt is the *hyposulphite of silver*. This product is easily decomposed by the action of light; it possesses a sweet taste; and if allowed to remain within the body of the paper it will soon cause the rapid fading of the print.

It is this salt that gives the greatest trouble to eliminate. Prolonged washing, especially by changing the prints from tray to tray of clean water, is the surest way to get rid of this dangerous element.

The use of a weak bath of common

alum has often been suggested as a remedy to counteract this chemical, but the remedy in this case is worse than the disease, because an element is introduced of an acid nature that will assuredly cause fading, especially with gelatine emulsion papers. The after washing of any such prints must be increased by many more changes; even then they are not reliable.

Many thousands of beautiful prints have been ruined, and quick fading set in, by the use of cardboard mounts that have contained traces of hyposulphite of soda. This latter material being largely used by paper manufacturers as an anti-chlor, as it is termed; that is, to correct the effects of chlorine and its compounds in the bleaching process. Although considerable attention has been given to the production of pure cardboard for photographic purposes there is a very large quantity employed for photographic mounts that is as impure as it is possible for a cardboard to be. This is brought about by the low prices in competition, particularly in the production of enlargements. The larger the prints the more common and impure the cardboard appears to be. Upon testing the water in which strips of this cardboard have been allowed to soak, hyposulphite of soda can be detected readily. It will not matter how much the prints may be washed previous to mounting when the cardboard mount contains such injurious impurities, there will be left no chance or condition for the lasting of a photographic print. Even the whites of a perfectly produced platinum print will soon become yellow, and although the print itself does not fade, the print as a picture will become ruined and unfit for exhibition.

A very unusual and unaccountable fading of a photographic print that the writer experienced five years ago, was experienced in the case of a burnt-in photograph upon a porcelain plaque. The print was made upon a collodion film prepared upon paper, with a chloro-citrate of silver emulsion, the print was carried to a considerable depth and toned in a solution of chloro-platinite of potassium, in combination with potassium oxalate, slightly acidulated with citric acid. The print was made from a good negative of a child. When the toning was complete the image was fixed in a solution of hyposulphite of soda and thoroughly well washed, and the film removed from the paper by a bath of hot water. It was then floated upon the porcelain and adjusted in position and dried. The process of burning-in took place, the image was covered with enamel, and, although it was a little weak, it presented a fine appearance. In the course of a few days the image seemed to be disappearing. This was thought to be imaginary. Such, however, was not the case. For at the end of fourteen days the portrait had entirely disappeared, leaving nothing but a block of pure white enamelled porcelain. Whatever may have been the true cause of this strange and unusual phenomenon, no attempt was made a second time to carry out the platinum toning of the image with the acid oxalate solution. A collodion transparency, made upon glass and perfectly toned in a solution of chloride of platinum, acidulated with a few drops of sulphuric acid, is one of the very best means for producing a photograph for burning-in with a certainty of no fear of fading.

Atmospheric conditions will affect a photograph if exposed long to its action. Many specimens that are exposed i the showcases of photographers are examples of this. The prints that show the least action in this direction are those made in carbon. Any trace of sulphur in the atmosphere will affect any print that has been made with the

salts of silver, no matter how minute the fumes may be, either of sulphur dioxide or sulphuretted hydrogen. These gases will attack the ordinary photograph and cause a yellowing all over the print. The action once set up continues until the print as a picture is completely spoiled.

Another source of fading prints is one that the photographer least suspects. This is in the water that is used for washing the photographs. If the water contains any saline substances, these are sure to remain in the prints after they have dried down, and lay the foundation of sure fading. Much as the idea might be ridiculed, the right thing to do in such cases would be to give the last two washings in clean rain water, or even distilled water, to be sure that no salts remain in the print. Ordinary water from the faucet could not be used to wash a daguerreotype plate, because of the trace of saline and organic matter that would spoil the finished picture with spots and tear marks.

One of the prominent sources of fading is the employment of a paste or mountant that is liable to acetous fermentation. It will be found upon examination of many prints made a year or two previously that there are a variety of streaks and markings all over the print, which are clearly visible through the paper as brush marks. This is due to the imperfectly made paste or mountant—paste that has been improperly cooked—the result being brought about by the starch granules becoming fermented by atmospheric moisture, thus setting up what is called acetous fermentation. No matter how slight the quantity of acid generated, the print will start to fade and continue to do so until it becomes unpresentable and not fit even to copy.

The above remarks apply not only to prints made with the salts of silver, but to every kind and description of photograph. If fermentation sets in at the back of any print the paper will also become affected. There are many very fine prints existing today that were made by the hot-bath platinum process, that have not been mounted, the whites of which have become yellow or degraded by age alone. This must not be considered as fading in the usual sense of the term, because all paper will become affected by time. As far as the platinum image is concerned there is no change whatever in the platinum deposit. The rich, velvety black still exists, which proves this class of photograph to be of a very permanent character. When an acid is present the fading is due to the oxidation of the image.

Many photographers have observed the imprints of the hand, particularly finger-marks upon a photograph after it is finished. This is due to the acid condition of perspiration of the hands during the process of mounting. It will interest many photographers to know how easily they can put this to the test. If the person who mounts the prints perspires moderately, take a piece of blue litmus paper, touch the perspiration with it. In an instant the paper will turn red. Or if the finger is pressed upon a piece of blue litmus paper by the person mounting the prints, and held there for a short time, a perfect imprint in red will be produced upon the test paper. This is due to either uric or lactic acid, or both, especially if such person suffers from rheumatism. When any large-size prints have to be dealt with it is a very good plan to wipe the surface of the print after the fourth or fifth change of water. Place a print say 11 x 14, upon a 14 x 17 sheet of glass, take a tuft of absorbent cotton and wipe the surface of the print with the cotton in a wet condition; treat each print in the same

way, while a stream of water is still running upon it. This certainly removes many little impurities that cling to the more or less viscous surface of the print, at the same time produces no injury whatever, but ensures the removal of surface impurities that cannot be removed by the ordinary method of washing. Upon examining the tuft of cotton this will become apparent, for it will be observed that a considerable quantity of organic matter adheres to the cotton, while at the same time the removal of the hyposulphite of silver has been greatly assisted and the whites of the print improved.

It has been remarked that even a carbon print will fade, after a short exposure to light and air. This is only true, when there is a trace of the salts of chromium left in the paper, due to either careless manipulation or a want of correct knowledge of carbon printing. If the carbon print, previous to mounting, is placed into a 5 per cent. common alum solution, for a few minutes, and then washed well in several changes of water, there will be no signs whatever of fading or a change of any description. The writer possesses carbon prints made in 1873 that are as clean and perfect in every particular as they were when made, thirty-four years ago.

As a surface protector for every kind of photograph, no matter what kind it may be, whether colored or not, the use of amyl-acetate collodion cannot be too strongly urged. The use of this material does not alter the character of the print at all, but protects it from all atmospheric influence, no matter whether it is due to sulphurous gases, damp or oxidation, a coating of this material will preserve a photograph in such a manner that nothing else will do. For the benefit of those who wish to prepare this article the following formula is given. The print can be coated either before or after mounting, and what is more, a photograph so treated may be wiped with a piece of wet absorbent cotton and cleaned without fear of injury to the print.

Amyl-acetate Collodion.

Gun cotton (pyroxyline)....400 grains.
Amyl acetate (concentrated) 10 ounces.

Shake this well, then filter through a lightly-made plug of clean washed-out cheese-cloth, pressed (not tightly) in the neck of a clean glass funnel; filter this twice, when it will be fit for use.

Should the collodion be too thick it can be thinned down by the addition of a small quantity of amyl-acetate. Allow the prints to dry spontaneously. Coat them at night, the next morning they will be fit for delivery. If any spotting is required, it must be done before coating the print.

THE PICTURE POST-CARD.

BY THE EDITOR.

In recent issues of this Magazine we have endeavored to get the photographer to realize the enormous and rapidly growing business that is being done in picture post-cards the world over. In this country the demand is just awakening, and the photographer who is wise will begin to look around and seize the opportunities.

In this country, where advertising is carried to a fine art, it is surprising to find that when it comes to advertising

the unrivaled scenic beauty of "God's Country" we are very far behind European countries in the matter of displaying our beauty spots. For example, Dresden in Germany, a city about the size of Indianapolis, requires no less than six hundred different post-cards to display its many charms, yet New York, some fifteen times larger, and more populous, has to get along with considerably less than half this number. In England there are in circulation over thirty thousand different cards, and you could put England into New York State. So it is very evident that the volume of business that can be done here is stupendous.

The question will perhaps be raised, Will the post-card craze last? Most assuredly it will. When the first railroad trains ran, it was predicted that as soon as the novelty wore off the patronage would fall off. The picture post-card fills a very definite want in the community. It conveys to the friends at home the scenes of the traveller's wanderings at a glance. We see a charming piece of scenery and wish to share the pleasure with others—the illustrated card does this for us. A line of greeting, a penny stamp, and Uncle Sam's mail service enables us to show our friends a reproduction of the beautiful scenery we are enjuying.

The American Photocolortype Co. has entered the field with the intention of picturing to the world, by means of the photographic post-card, the beauty spots of the United States, which are as numerous as they are varied and magnificent. The scenic grandeur of most of our railroads is only beginning to be realized, and the companies are seizing upon the picture post-card as a most invaluable means of advertising. The Photocolortype Co. have in hand already the choicest views of over two hundred railroad and steamship lines. Thousands of nature's beauty spots have yet to be impressed upon the sensitive plate for the first time.

The photographer with some spare time and a view camera has, within a few miles' radius from his home, a thousand and one opportunities to secure negatives that he can turn into money makers. Transportation companies, traffic managers, industrial and immigrant agents, commercial clubs, home-trade leagues, and business men's associations, are all open to purchase attractive pictures for advertising purposes. They are finding the picture post-card the best medium.

The April issue of this magazine contains much practical information on the making of post-cards, and further information can be obtained by corresponding with the post-card manufacturers advertising in this issue.

If figures are needed to show that the picture post-card is booming in popularity the following clipping from the *Publishers' Weekly* should convince the most sceptical:

"Instead of declining in popularity the post-card trade in some localities has become almost the one thing that attracts custom to the bookstores. Indeed, the aggregate of this business is enormous. There are no official statistics on the subject, but all estimates run into the millions. During the Christmas week last year in one day 50,000 Souvenir post-cards by close count, passed through the Albany, (N. Y.) post-office. A man who last started a little booth at one of the seaside resorts near New York City is said to have sold on an average of $45 worth of souvenir post-cards a day. It is estimated by several American printers of post-cards that there are now 80,000 stores and booths handling these cards, as against 100 three years ago. According to another estimate made by the same printers there was

spent during October, November, and December last year not less than $200,000 a day in this country for picture post-cards, and that at least one person in every eight in the United States buys one of these cards every day in the year. A Chicago company that makes a business of reproducing and manufactoring picture postals advertises that for one publisher they printed 4,000,000 cards in five months, and that for another publisher they are turning out 50,000 cards every day of the week. The official estimate of the number of picture post-cards that passed through the British Post-Office last year is 5,000,000,000, and the probable value of them was about $5,000,000.00. The revenue to the post-office, it is claimed, was over $10,000,000.00." Where did the photographer come in?

REFLECTIONS.

BY FELIX RAYMER.

PERHAPS one of, if not the chief, troubles a photographer experiences in working his light, is to overcome extraneous or reflected light. Many times he blames his skylight, claiming it is not set in the building at the right angle, or is too small, too wide, or too long, when as an actual fact the angle, size, length, or breadth of it has nothing to do with his work. Few operators give to their *rooms* as well as their lights the study necessary. Most have the idea that any room will do so long as the light is right, and their lens short focus enough to work in it. But as often as not, the troubles, or a great portion of them, they are experiencing, come from the arrangement of their operating room. There will be a certain amount of reflected light from any room and light. It is an absolute impossibility to control every ray entering the skylight, and a few of them wander off, striking smooth surfaces contained in the room and are then reflected back toward the subject, and to the critical eye show their effect in the face.

The Side Reflector.

One of the greatest bones of contention between operators for years has been the old time-honored reflector used on the shadow side of the face to give detail in the deepest parts. Many claim they *never* use reflected light, equally, as many claim they *always* use it, and still others claim they use it when it is needed. The latter class are the operators who *know* what they want and *will* succeed in getting it by any means possible. Those who claim they *never* use it, claim as their reason for not doing so, that it destroys modeling. True, it will unless used right. Few of them realize that the reflector should stand on the shadow side of the face in exactly the same position as the skylight does on the light side. If the subject is placed so that the entire skylight is in front of him, so should the reflector be placed. If it stands at any other angle it gives *false reflections* and hence the destroying of the modeling. Again, where the reflector is used it is too often used too near the subject. It has been my experience that to place the reflector as I have described, and the same *distance* from the subject, on the shadow side that the skylight is on the light side, will give ample detail for the deepest shadows. Its effect should not be seen, or at least not be so plainly seen that

one can say of the picture. "A reflector was used here."

The Eyes.

As a rule reflected light of all descriptions can be noticed in the eyes sooner than anywhere else. The ball of the eye being a moist surface catches the reflections, and if the operator is a close observer he will see these stray rays. This is especially true where the reflections come from the front. Often a background set at an angle will throw a reflection on the eye, and just here, I will say, whatever affects the eyes will affect other parts of the face too; perhaps not so noticeably, but when the retoucher has his work to do he will notice them. Many a retoucher has twice the amount of work to do on his negatives for the reason the operator was careless or did not know how to control his reflected light as well as his skylight. If the reflector on the shadow side of the face, stands too near the subject, a small "speck" of light will appear on the lower edge of the iris of the eye. If the operator will get close to his subject and examine the eye he can see the shape of the reflector in this spot of light. The same is true of the little "catch light" we try to get in the eyes; they are a small reflection of the skylight. With this knowledge the operator can readily locate his trouble If there is a window in front of his subject it should be closed off during the exposure. The reflector should stand away from the subject far enough to prevent the little dart of light appearing on the lower edge of the iris. If it does appear there is extra work for the retoucher to etch it out. Often our subjects wear glasses, and we are bothered with the reflections on them. The first inclination of an operator, unless he knows the secret, is to turn his sitter from the skylight to remove the reflection from the glasses. This is the worst thing possible and really makes it more pronounced. The remedy is to turn the subject toward the skylight, slowly watching the reflection until it disappears. Do not turn him further than necessary, for to do so gives a flat lighting. The reflection on the glasses is caused by the reflector on the shadow side of the face, and the remedy is to turn from it to the skylight as stated or remove the reflector. This last measure is often impossible, due to a loss of detail when done, so I advise the first.

The Room.

Frequently the room itself gives many sources of reflected light. The walls may be papered or frescoed in light colors, and if they are it is a foregone conclusion there will be reflections from them. If the walls are of a lighter shade than the shadow side of the face, they certainly will have their effect on that side of the face. Any such reflected light should be avoided, for the operator has no control over it. It comes in from all sides, and with the result it strikes the face from several different directions and sources, and we must bear in mind our instructions in art from all the masters was and is to "use but one source of light" in our lighting of the subject.

The Background.

There has been quite a rage for white backgrounds in later years; but notwithstanding this fact there are very few operators who know how to use them and get good results from them. I once heard an old operator and artist say the reason so many operators worked in "low keys" of light was because "high keys" were so much harder to manage. This I believe to be true, and the introduction of a white ground raises the key many degrees. The reason for the low key

being easier to control is that there is less light to give reflections and foreign sources of light. One effect seen in the lightings where a white ground has been used is a very fine line of light showing around the outline of the face on the shadow side, which is caused by having the ground placed at too acute an angle facing the light in the endeavor to make it as white as possible. Turn the ground away from the light a trifle and this false light disappears at once.

The Floor.

If reflected light comes from the floor, it shows on the iris of the eyes the same as when the reflector is too near the subject, except that it shows on the under edge of the iris. It can be easily seen if the operator will pass his hand backward and forward under the subject's face; as his hand moving will show darker on the iris as it passes over the reflection. In conclusion, I will say I have never known the time when the light falling from the skylight gave trouble, but it is after this light strikes some foreign surface and is reflected back in the form of reflected light that causes the trouble.

RODIN ON POSING.

[WAITING in the studio of Mrs. Kasebier, some time ago, we picked up a new *Life of Rodin*, by Frederick Lawton, and came across the following observations of Rodin's on posing that apply with equal force to the photographer, who is so apt to forget that the sitter has a personality of his own and which he can best express unaided.—ED. W. P. M.] . . . . I should like to call myself a naturalist, but that word is so much misused both by critics and the criticised. It is safer for me to say that I feel myself to have most affinity with the Greeks, not with the school that colored their statues—color has nothing to do with statuary. Light and shade are all a sculptor needs, if his structural expression is right. . . . Nature has been my great teacher. Everything can be obtained if Nature is followed. In my early apprentice days, I had not thoroughly learned my lesson, and in seeking subjects sometimes relied on my unaided imagination. But I came more and more to see how much analogy there was between all the forms that Nature begets; and thenceforth I had only to observe them closely; to place myself, so to speak, in the midst of them, for like shapes to arrange themselves in my fancy and to make a harmonious whole . . . So many who begin to study dictate to Nature; if they have a man or woman model before them they impose a preconceived attitude with no relation to the mind or actual intention of the subject. Today, toward the end of my career, I still content myself with leaving my model to himself or herself. *I dictate no poses.* At most, I venture to prolong them, when I have found what I seek. . . . Any dictated attitude is for the nonce unnatural and is worse than useless to the student. It is the finite substituted for the infinite, isolation and interruption of the secret law of our being; the body loses its charm and becomes absurd and ridiculous. . . . I reproduce only what I have seen, and what anyone else could see if they would only take the trouble; but then I am always looking, and I know there remains to be found out infinitely more than I shall ever have time to discover. . . . People don't perceive that reality of every kind can have its

perfection, age no less than youth; what is called ugly no less than what is called beautiful. To some extent it is realized in painting—and more in painting than in sculpture. The portraits of Rembrandt and Holbein show people old and wrinkled, but the beauty is there that belongs to humanity. It cannot be otherwise. Nature is always perfect. She makes no mistakes. The mistake is in our standpoint, our vision. There is beauty in a skeleton; but it wants observing from all around, for the fineness of the workmanship, the exact adjustment of all its parts to be duly admired, to be understood.

PRACTICAL NOTES ON SENSITIZING AND KEEPING CARBON TISSUE.

BY E. W. FOXLEE.

NOTWITHSTANDING that the carbon process has been in general use for more than forty years, there appears to be many who do not so fully understand as they might do the characteristics of the tissue under different conditions. If they did most of the troubles that inexperienced workers occasionally meet with might be avoided. In these notes it is the object of the writer (who, by the way, has been a worker of the carbon process ever since its introduction) to point out some of the behaviors of sensitized carbon tissues.

The tissue, as supplied by the manufacturers in the insensitive state, is said to keep for years. So it will, but only under one condition, which is that it be kept dry. When issued by the maker it is in a perfectly dry state, and it is necessary that it be retained so. Gelatine, the vehicle holding the pigments, is an absorbent of moisture, and it is tolerably well-known that when in a moist state it soon becomes mildewed, particularly if the temperature at which it is kept is at all warm. Tissue that has been stored in a damp place is sure, after a time, to show spots of mold. These can usually be wiped off with a dry cloth, and will leave no apparent trace behind. But if such tissue be sensitized or printed, the prints when developed will show spots or markings wherever the mildew spots were. Therefore, when long-kept tissue shows signs of mold it should be at once thrown away, for it has practically become worthless and any attempts to use it would prove futile.

The keeping qualities of carbon tissue after it has been sensitized depend upon several quite trivial things, some of which will here be explained. Tissue that has been sensitized in the making —that is, where the bichromate has been incorporated with the pigmented gelatine before it is applied to the paper—has, all things being equal, greater keeping qualities than that which is sensitized after it is made. The majority of the tissues supplied by the manufacturers in the sensitive state are sensitized in the making. But some, with colors that are not in regular demand, are sensitized afterward, in which case they have not the same keeping qualities as the others.

The keeping qualities of tissue are considerably influenced by the time that has been occupied in its drying. The longer the time it has taken to dry, the shorter will be the time that it will remain in a soluble and workable condition. On the other hand, the quicker it is dried the longer it will

keep in a satisfactory working state. If, however, it is very quickly dried it is apt to yield somewhat hard prints, owing to the great solubility of the gelatine, unless it be kept for a day or two. These remarks apply equally to tissue sensitized in the making and that which is sensitized subsequently. It may here be mentioned that, as a rule, tissue that has been long in drying is more sensitive in printing and *vice versa*.

The strength of the bath in which it is sensitized, or the quantity of bichromate used when the tissue is made in the sensitive state, is a factor in the case. The larger the proportion of bichromate it contains the shorter is the time it will keep. If the bichromate used for the sensitizing contains free chromic acid the tissue will quickly become insoluble. The presence of chromic acid, however, can always be avoided by adding to the solution a little liquor ammonia, just enough to slightly reduce its strong color, though a considerable excess does no harm. Tissue that has been sensitized in the making, and dried under favorable conditions, as it always is by the makers, will usually keep good for a fortnight or three weeks, according to the temperature, provided it is stored with ordinary care. That sensitized at home and kept under similar conditions will not, as a rule, keep more than a few days—a week at the outside.

We are here assuming that the tissue is stored under what may be termed normal conditions, say, pressed closely in a printing frame to protect it from the air; but sensitized carbon tissue may be preserved for several months and yet remain in excellent working condition. I have myself kept it for six months without apparent change. The only condition necessary is that it must be retained absolutely dry, and this can only be ensured by storing it in a chloride of calcium tin, say, one similar to those in which platinotype paper is preserved. If when the sensitive tissue is received from the makers, or as soon as it is perfectly dry if sensitized at home, it be put into an air-tight case with some chloride of calcium at the bottom, it will remain in good condition for months. This is a great convenience to those who buy their tissue in the sensitive state and have no opportunity of using all of it up within a week or two of its receipt. The ordinary platinotype cases answer admirably for the purpose, and if they are used it is advisable that the tissue be rolled the coated side outward. If it were rolled up the other way, as it becomes very dry over the calcium, there might be a risk of its cracking when unrolled. Cases provided with chloride of calcium, in which the tissue is retained flat, are now on the market; they are very convenient and of a quite moderate price. These are preferable for small sizes to the cylindrical tubes.

It was mentioned above that the proportion of bichromate in the tissue had a material influence on its keeping properties. It also has an important influence on the character of the print it yields. For example, if a piece be sensitized for a given time in a 5 per cent. solution of the salt, and another, say, 10 per cent., one and both are dried under similar conditions, the former will be much more sensitive than the other, but it will not keep for nearly so long a time. If prints be made with the two tissues on the same negative there there will be a marked difference between them. Supposing the negative be of the vigorous type, such as is usually considered the best for the carbon process, that with the stronger bichromate will be of a more soft and delicate character than the other. If the negative be one of the weak or flat type, the print made on the tissue sen-

sitized in the weak bath will be the better of the two. Should, however, the negative be of the hard kind, the print made on the tissue sensitized in the strong solution will be far better than the other, which will probably be bald and raw in the high-lights. Therefore, when one has to print from hard negatives a strong sensitizing bath should be employed, and when feeble ones—those lacking in contrasts—have to be dealt with a weak solution should always be used. Hence, with the carbon process, by modifying the tissue in the sensitizing, good prints can be obtained from all types of negatives, although there seems to be a prevailing idea that, with it, good results can only be got from what are called vigorous or contrasty ones.

It is not, however, necessary that more than one bath be used if that be of medium strength—say 3.5 per cent. A long immersion in that, four or five minutes, according to the temperature, is equivalent to using a strong solution; and a shorter one, say one to two minutes is equal to using a weak bath. If the tissue, when removed from the bichromate bath, is squeegeed on to a glass or ferrotype plate it can be still further modified. A heavy squeegeeing removes a great quantity of the solution, but a light squeegeeing but little. It may be kept in mind that it is the quantity of bichromate in the tissue that governs its characteristics, both as regards its keeping qualities and the kind of prints it yields.

Drying the tissue, so as to get in a good working state, was at one time looked upon as a bugbear in the carbon process. However, by squeegeeing it on to a ferrotype plate, and allowing it to dry on that, this trouble is avoided. Under these conditions it may take a little longer, as the evaporation of the water is from one side only, but that is of small moment, seeing that while drying its surface—that upon which the image is formed—is perfectly protected from injurious fumes, dust, etc. What is more, it may be dried in open daylight, as the yellow, from bichromate, paper protects the gelatinous surface from light. To hasten the drying it may even be placed in the draught from an open window, where, at this time of year (May), it should dry in three or four hours.

With the stripping films of the Rotary Photographic Co., this system of drying will not answer—for two reasons: First, the thin celluloid backing, through which the image is printed, is transparent; second, because the moisture could not evaporate through the celluloid as it does through paper. Therefore, it must be dried by suspending it in a darkened room; but, by reason of the thinness of the gelatine coating, it dries much quicker than does the ordinary carbon tissue. If a suitable room is not available a good sized box may be used for the purpose if a little chloride of calcium be placed at the bottom. In this way the tissue may be very quickly dried, and that, under the best possible conditions.—*Photo. Notes.*

Black for Aluminium.—Clean with fine emery, wash well, and dip rapidly in:—Ferrous sulphate, 1 oz.; white arsenic, 1 oz.; hydrochloric acid, 12 oz.; water, 12 oz. When the color is deep enough, dry off with fine sawdust and lacquer. The metal should be very rapidly dipped, and as quickly withdrawn from the mixture and allowed to drain, repeating the operation if necessary.

Liquid Glue.—Swell glue (8 oz.) in water (10 oz.). Dissolve on water-bath, and add slowly, with constant stirring, nitric acid, sp. gr. 1.33 (2½ oz.). Keep well corked.

NIGHT PHOTOGRAPHY.

(Continued from page 330.)

Churches by Night. Some churches when lighted up at night afford very pretty pictures, especially if the stained glass windows are well illuminated. This class of subject is the only one for which I would recommend the use of rapid ortho chromatic plates, and with an aperture of F .11, giving an exposure of thirty to forty minutes.

In all other classes of night photography I much prefer ordinary rapid plates as I have found that instead of orthochromatic plates being quicker at night they are if anything slower. Then, again, they have to undergo such prolonged development that there is every risk of either chemical fog or light fog taking place.

Railroad Stations by Night. A large railroad terminus offers ample scope for photographic work, but great care has to be taken to avoid moving lights, or in photographing a large engine to be sure that it is not likely to shunt when you have only half of your exposure done. Owing to the close proximity of arc lamps, double-coated plates well backed are an advantage. Exposures may be very quick; using a rapid plate and an aperture of F .8, a fully exposed negative should be obtained in four minutes.

Shipping and Harbor Scenes. Shipping of any sort always lends itself to pictorial treatment and on a fine clear night very good pictures may be obtained. Care must be taken to avoid movement either by rising or falling tides, or by wind. The most imperceptible rock or sway of a ship's mast will spoil the photograph. Exposures are much the same as for street work, *i. e.*, a rapid plate, well backed, F .11, fifteen minutes or so.

Seascapes and Clouds.—Some particularly beautiful skies are to be seen at night during the summer, and using F .8, a rapid plate not necessarily backed, one can get a negative with three minutes' exposure, providing that the clouds are not moving too rapidly.

Moonlight Effects. With a full bright moon exposures at night are not so lengthy, and an open view such as a large city square may be taken in four or five minutes using F .6 and a well-backed rapid plate. An open view in the country free from artificial lighting under similar circumstances will take half an hour to three-quarters. It is of no use attempting country work unless by moonlight, but bits of road with clumps of trees and perhaps a little thatched cottage help to build up very pretty moonlit views.

Care must be taken not to include the moon, or the result will be a long elliptical-shaped mark across the sky as a result of movement.

I might state with tolerable accuracy that all night photographs that include a moon are faked. Certainly those sold as post cards are. The method of their production is to snapshot against the sun and to develop the negative up thin; artificial lights are then put in with the brush. Certainly these faked night pictures are very pretty, but they depend greatly upon cloud effects, and the artificial sources of illumination put in with the brush give a false and very feeble idea of light and shadow.

Mr. J. B. Edwardes devised a means of including a real moon in the photograph simply by making an exposure on the moon and then capping the lens and waiting until it had moved out of the view, when the exposure was continued.

Perhaps this is the best method of putting a moon into the view, and it can be strengthened very considerably by careful local intensification and pencil work.

As it is my intention to speak entirely upon pure night photography, I will not trespass further by mentioning many other ways of faking moonlight views. Before leaving the question, however, I must warn intending "moonlighters" against over-exposure. One has a considerable amount of latitude in night work, but never give more than twenty minutes on a well-lighted street scene, with full moon, a rapid plate and F .11; five or ten minutes more than this, and no matter how carefully you develop your plate, the result is a "daylight" effect.

Panoramic Views. Panoramic views may be taken either on the one plate by taking the view from a great distance. The horizon on the plate may then be enlarged and trimmed down. Two plates or more may be exposed by turning the camera on its centre and joining up, but in this case it is preferable to be very much nearer the subject to be photographed, otherwise the artificial lights will be too small and the whole picture a mass of minute detail only discernible with a powerful glass.

Snow Scenes. Either city or open country abound in choice subjects after a fall of snow, when everything is covered with a white mantle. If the night be clear, and things stand out sharp, very quick exposure may be given much the same as for moonlight, only one must cut down the exposure if we have the moon as well, and under such circumstances it would be possible to do a fully lighted street scene, using a rapid plate and F .11, in about fifteen minutes.

Coming now to the question of plates, any plate may be used no matter how quick or how slow, only, as we do not care to stand about all night over an exposure, the quicker the plate the better.

Snapshot isochromatic plates are suitable in some cases, but as a rule I avoid them for night work, although I would not be without them for daylight exposures on any account. There is far too great a risk of light and chemical fog in the development, which is necessarily prolonged, not to mention the fact that they have always proved themselves much slower in my hands than ordinary rapid plates.

Films may be used and need no backing, as owing to their extreme thinness and the fact that they have a paper backing they are very free from halation.

No matter how well backed a plate may be, halation is not entirely prevented, and except where enlarging is resorted to a little is necessary for pictorial purposes.

Having been out in the dark we will now go into the dark-room, and here commences the real work of night photography. In the first place cleanliness has to be strictly observed, clean dishes, clean hands, clear solutions free from sediment, and a perfectly *safe light.* Whatever developer we may use, and we all have our favorites, it must be diluted down very considerably, quick developers such as rodinal more so than slow ones such as pyro soda, for our plate has to be coaxed up slowly, not driven or forced. On no account should a plate be developed in less than *twenty minutes* or over *forty minutes;* generally speaking it may be finished in half an hour. One of the main reasons for failure by many who attempt night photography is that they invariably treat the plate much the same way as they would daylight exposure, and as a consequence up flash all the high lights black and dense, and the shadows—well, there is nothing else but shadow when the plate is fixed, with a lot of black circles indicative of light.

To develop the plate, the gelatine surface of which should on no account be fingered, it is placed in a perfectly

clean dish film up and flooded with the diluted developer, it is then covered up, and rocked well to free of any likely air bubbles. After having been in the developer for a few moments the plate is removed, and either placed into a large dish with cold water or put film up under a running tap, and held there while the backing is removed with a tuft or cotton wool. The light should be turned down as much as possible without inconvenience to prevent any chance of fog. Unequal development would take place due to draining off of the developer if we were to remove the backing without keeping the film flooded with water. After the backing has been removed, the plate and dish should be well rinsed and then flooded with fresh developer sufficient to cover the plate about one inch deep. It is then covered up and may be safely left without continuous rocking for ten minutes, a slight rock being given at odd intervals.

On no account should the plate be examined by transmitted light; always look at it by reflected light as it lies in the dish; and before renewing the developer, which should be done every ten minutes, thoroughly rinse off the old stuff. To one not accustomed to the appearance of a night negative, it may be somewhat disconcerting to find next to nothing on the plate after twenty minutes' development, but it must be remembered that our view is a night one, therefore, the shadows will largely predominate, and shadows are in a negative almost clear glass. Do not examine the plate too much during development; I never look at mine until well over ten-minutes. You are perfectly safe to leave it; your developer is weak and cannot do any harm. When to stop development is a question most serious, a question oft asked but not so easily answered, at least in daylight work. However, I think that one may safely say that a plate is fully developed when the celar margin around the edge due to the rebate of the carrier begins to get discolored or smoky; this is a sign that the developer has done its work, and that the unaffected silver salts are being attacked. The blackness of the high lights should also be taken into consideration; they must be pretty strong, yet not too strong or they will print out chalky. Having given half an hour or more for the development of a plate that we feel has been pretty correctly exposed, we are quite safe in giving it a rinse in a little stronger developer for a moment, rinsing in water for a minute or so, and placing in the fixing bath. This should be pretty strong, more so, perhaps, than that used for daylight negatives, as there is considerably more silver to remove. I have no special strength—speaking photographically—and pop them into a bath made up in a very rough and ready and not too economical way. Thorough fixation is essential, and on no account should the plate be examined by ordinary light until fixation is complete. I never allow less than fifteen to twenty minutes for this operation, and if the plates are double-coated, not less than thirty to forty minutes.

As regards developers, I prefer pyro soda made up according to the "Imperial" formula which I need not give here, suffice to say that I use about 4 drams of the pyro to 5 drams of the alkali in about 16 ounces of water. This is only approximate: I sometimes use it a little weaker or a little stronger. To finish off a plate, I rinse it in 1 ounce of the normal developer (equal parts of pyro and alkali) in 8 ounces of water. This must not be allowed to act on the plate longer than one minute; it is simply used to strengthen up the detail. On no account use bromide in development, unless it be with a camel's-hair pencil to retard a too obtrusive high light.

In using quick developers such as rodinal, dilution must be carried to the

extreme, say perhaps 1 dram in 20 ounces of water. Too much pyro soda developer in a diluted state should not be made up at once, as in this condition it is rapidly oxidized, and stains instead of developing the negative. For this reason a plate should certainly not be left longer than ten minutes without changing the solution.

Having fixed, the next proceeding is washing. This ought to be well done in perfectly clean running water, so that on removal from the washing tank there are no specks of grit or other particles adhering to the emulsion.

Intensification can only be applied locally to skies. I would strongly advise that a negative that through underexposure is somewhat thin should be thrown away, if it is at all possible to obtain another. I have never yet been able to improve a thin "night-scape" by intensification except, perhaps, locally to strengthen traces of cloud in a sky.

Reduction may be attempted with success, but care has to be taken that it is not carried too far. Local reduction is very necessary sometimes when an arc lamp shows up too strong in a view. The mechanical Globe Metal Polish reducer is very handy in such cases if carefully used with a stout artist's stump. It is much more preferable to take a view over again if possible than attempt either intensification or reduction.

As to the preservation of the negative, it should be carefully varnished, the plate being well-flooded and then thoroughly drained before setting up to dry, for little rills of varnish will print up distinctly. Thin negatives of this description ought to be varnished if they are valuable at all, although I do not varnish my own, and as a consequence have lost a goodly number of them through printing stains, etc.

Before concluding, some mention may be made of the most suitable methods of printing night views. The best effects are obtained by printing in black or blue carbon—browns, reds, and other colors being, of course, not suitable. Platinum prints stand first and foremost, followed by black or blue carbon, double or single transfer process, according to necessity. Bromide paper for either contact or enlarging. I will not enter into details concerning the methods of working these various processes as they are already very well known. There is only one thing I might mention, and that is to ensure thorough fixation, but at the same time not to leave prints too long in the fixing bath, or the shadow will lose their rich blackness so necessary for contrasty effects in night views and become gray.

Toning is of no use, but a yellow color may be imparted to the high lights by immersing the washed print in a solution of potassium permanganate about 2 per cent. in strength. This must be carefully done, for if too much permanganate be used, the print will, after a week or so, turn purple and go off color. I had the misfortune to exhibit a print treated in this manner, and it had not been on exhibition three days before it went purple in the face—presumably with shame.

In mounting and framing every one must suit their own taste, but I have found by experience that dead black borders and frames set night pictures off to the best advantage, the margin between print and paper to vary according to the nature of the subject. Very frequently it may be better to frame close up without a margin at all.

In conclusion, whatever may be the nature of the subject photographed at night, keep a note of exposure, weather conditions, etc. It is impossible to remember every little detail, and carefully-made notes will be of the greatest assistance in preparing a table of approxmate exposures for future work.

By O. C. Conkling, St. Louis, Mo.

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By O. C. Conkling, St. Louis, Mo.

By Gessford, New York

By A. T. Proctor, Huntington, W. Va.

E. S. CURTIS, PHOTO HISTORIAN.

BY SIDNEY ALLAN.

ALTHOUGH it is difficult to tell the whereabouts of E. S. Curtis at this moment, there is no doubt that he is just just now the most talked-of person in photographic circles.

His publisher or manager, whoever that may be, seems to be engaged in a huge advertising campaign. Wild rumors are afloat that Pierpont Morgan is backing Curtis with immense sums. There is much talk about the forthcoming edition de luxe of *The North American Indian* in ten to twelve volumes, at three thousand dollars per copy, and President Roosevelt, who, like the German Emperor, likes to have his say about everything, has endorsed the work in a foreword.

The publication of such a work which will contain about 2200 photogravure illustrations (a third of which will be twelve by sixteen inches) is, of course, a stupendous undertaking. Some noise has to be made, in order to avoid too great a loss of the invested money. But it is not particularly dignified. One would prefer to see less glamor and lime-light flare connected with a serious scientific publication, as this pretends to be.

I never had the pleasure of meeting Mr. Curtis personally, but I have heard a good deal about him indirectly. A friend of mine, Albert L. Groll, the painter of "Arizona," has met him while photographing the Hopi Indians, and told me all about the photographer's field outfit and his curious way of working. There is no doubt that this man is sincere. His fifteen years of camp-life devoted to the task prove it. He probably knows about the Indians as much as any other man alive, and seems to possess the faculties necessary for making valuable records of his knowledge and observations.

As the Indian Commissioner, Francis E. Leupp, says in the introduction: "*The North American Indian* will give a complete written and pictured description of every detail of the lives, customs, and folklore of every Indian tribe in the United States. All phases are pictured—the Indians in their environment; the types of the old and young, their primitive home structure, their handicrafts, their ceremonies, games, customs—with an object first to truth, then to art composition."

Truly a gigantic task. And I believe it is safe to say that the work will satisfy all expectations as far as truth is concerned. It will give a truthful record of the Indian race, and as an ethnological document will be invaluable.

Walt Whitman, in his prose writings, expressed more than once his regret at the ultimate fate and extinction of this wild and beautiful race. And, although some authorities claim that "the Indian race is not dying out, and that some tribes are steadily increasing (as, for instance, the Cherokees, who adopt all who marry into their tribe)" one can hardly be very sanguine on that subject. I perfectly agree that Mr. Curtis' undertaking is one that can not easily be repeated. The red savage Indian is fast changing into a mere ordinary, uninteresting copy of the white race. And although opportunities for similar records may continue to exist for some years to come, there will probably be no other Curtis to do it. He is an enthusiast and has made it his life's work, and none of his occasional competitors will succeed in gathering a more

valuable and complete accumulation of material.

Curtis is the pictorial historian of the Red Man, and he has done more in that respect than any painter has been able to do. And it was the camera that won out for him. A painter is apt to let his imagination run away with him. He is never to be relied upon for accuracy, and accuracy is what makes Curtis' records valuable to posterity. There is no making of pictures for pictures' sake; a Sioux must be a Sioux, an Apache an Apache. In fact every picture must be primarily an ethnographic record. Being photographs from life they show what exists and not what one in the artist's studio presumes might exist.

Of course, black and white reproduction has its drawbacks. "An Indian is only half an Indian without the blue-black hair and the brilliant eyes shining out of the wonderful dusky ochre and rose complexion." Also his paraphernalia, feathers and paint, etc., suffer greatly by monochrome depiction. Another serious objection is the photographic process itself. It cannot grasp ideal traits. It necessarily falls short in the highest characteristic representation, that which the painter can add by his thought. A photograph will never go beyond the record, and the more faithful the photograph is the truer this will be.

Pictures as George de Forrest Brush has painted, notably his Indian plucking a water lily, and his Indian in a canoe gazing at the flight of a wild swan overhead, will convey to posterity a finer conception of the aboriginal American than any photograph can ever do. And yet there is a question whether the Indian is really such a wonderfully inspiring subject for an artist. Despite their characteristic make-up, their primitive way of living, and their peculiar ceremonious rites they can hardly claim to be as picturesque as, for instance, the Arabian horsemen that Shreyer paints. Their circlets of eagle feathers, necklaces of bear claws, headdresses of colored braid, blankets and drab buckskin leggings, hideous wooden masks and moccasins embroidered with glass beads are too gaudy, too loud to be truly pictorial. Everything has to be subdued, reduced in value, idealized, made more poetical, but also less real. All the painters who have tackled this subject, Wimar, Shirlan, Gaul, Cary, Farny, Deming, Hamilton, Latoix, de Cort Smith, Mosler, etc., have had the same experience. The material was too uncouth for them; they either produced pictures that were a trifle awkward and prosaic, or idealizations, that do not ring quite true.

In a black and white delineation harmony is much easier obtained. It is only necessary to transfer the record into a low tone; and it is this toned quality which Curtis applies in the majority of his pictures—and I fear artistically almost to his undoing. The majority of his pictures I have seen were all a trifle muddy. That of course is a fault of the handling and not of the process. The workmanship of the Curtis print could be improved upon and I do not agree with some of his lay critics, that "he has created the most beautiful and artistic series of photographs that the world has ever known."

Not even as far as photographs of Indians are concerned. Some of the Kasebier and even Goldensky's Indian pictures are way ahead artistically. But they are merely isolated examples. They do not count when one considers the aim and intrinsic value of Curtis' work. He has done what no other photographer has done. He is *the* photographer of Indians, and will live as such.

Much could be said, I suppose, about

his methods as a photographer, and the adventures of his various canvas wagon journeys when he is "gunning with his camera," but as I am not familiar with either it is best to leave it to others. He himself would probably prove the best narrator of his manifold experiences.

The majority of his prints seem to be snapshot enlargements, no doubt the safest way to arrive at results.

The scope of his book is absolutely exhausting. The first volume treats of the Apaches, Jicarillas and Navahoes. Volume II will cover the many tribes in Southwestern Arizona and in the Colorado, Gila, and Salt River valleys. The different Sioux tribes of North and South Dakota will come next in order, in volume III, and volume IV will treat of the tribes of Eastern Montana. The fifth volume will depict the tribes of Western Montana and Idaho and the sixth the tribes of Eastern Washington.

Other volumes will take up the Mission Indians of Southern California, the aborigines of Northern California and Oregon; those on the Northern Pacific coast and Puget sound, and the coast Indians of Alaska and the Pacific coast. One will be devoted to the Hopis and one to the other different Pueblo tribes. There probably will be a volume on the Seminoles of Florida, and Canada will have, without doubt, one volume which will practically be what might be called a treatise on the "Woods Indians." The final volumes will take up the tribes in Oklahoma and Indian Territory.

We will become acquainted with the tribes of the mountains and the plains. We will learn to know them as they hunt, as they travel, as they go about their various avocations on the march and in the camp. We will be introduced to their medicine men, sorcerers and story tellers, their chiefs and warriors, their young men, squaws and children. And we will not only see their vigorous outward existence, but catch glimpses of that strange spiritual life of theirs, their mythology, folklore and religious ceremonies—whose innermost recesses were never fathomed by white men.

BRIGHT PRINTS ON STALE PLATINUM PAPER.*

BY JOHN BARTLETT.

It goes without saying that the best results in platinum are to be had only with the use of fresh paper.

Every effort is therefore made to protect the sensitive surface from any action which might tend to impair the vigor of the print.

But despite the care of the manufacturers as well as the users of the paper its keeping qualities are by no means on a par with that of bromide paper. Platinum paper deteriorates after a few months even when kept in sealed tubes, and the stale paper can only be employed by the votaries of æsthetic feeling in photography. While the advocates for softness and lack of gradation may be artistically justifiable in their preference, the majority of workers are more desirous of bright, crisp impressions from their negatives. Several methods have been proposed for utilizing the paper after its deterioration, but the results, in my judgment, are not such as a practical photographer would consider worth keeping.

* A paper read before the Photographic Society of Philadelphia.

The method generally recommended is the addition of a certain percentage of bichromate of potassium to the oxalate of potassium developer, which seems to act as a sort of retarding agent but the results are by no means pleasing, and indeed it is only efficacious with paper not too stale.

Where the method does succeed, there is a certain harshness and lack of half-tone which would condemn the print at once by any one having an appreciation of the beautiful softness and richness of a fresh platinum paper print.

Instead of the bichromate of potassium, that is, the acid salt, I employ the neutral chromate of potassium, a salt not so generally used in the arts as the bichromate, and therefore not as well known. It is distinguished from the bichromate by its canary-yellow color, the bichromate being of an orange tint.

The maximum amount is one-half grain of the potassium chromate to the ounce of oxalate developer diluted with one-third water. But this I might say is for desperate cases, such as the examples I here show.

The paper, as you may see from the date on the can, is over five years old, and yet I have been able to produce a comparatively bright picture, a trifle hard perhaps, but certainly vastly superior to examples accompanying it made upon paper treated to a development by the other method suggested for improvement of old paper.

Few of us have paper as old as the specimens exhibited, and it was only by an accidental discovery in the archives of the Society that I lighted upon the antique samples.

For paper a year or two old I would recommend half a grain to two ounces of diluted developer. Of course a little judgment will be needed, as an excess has a tendency to give harshness.

The formula, by the way, might be advantageously used to secure vigorous prints from weak negatives.

The addition of the chromate of potassium to the oxalate developer in no way interferes with its keeping qualities. It may be used repeatedly and bottled up and labeled "developer for old prints."

I may add that I found the suggestion of Mr. Zimmerman, to use hot acid to remove the iron salt, added to the brilliancy of the print, but I prefer acetic acid to hydrochloric, as it is not so volatile when subjected to heat.

TANK DEVELOPMENT WITH PYROGALLOL.

BY G. T. HARRIS.

[THE following article on tank development for landscape work, taken from our London contemporary, *The British Journal of Photography*, is interesting in demonstrating the further possibilities of this system. Mr. Claudy demonstrated its possibilities for portrait negatives in our May issue.—ED. W. P. M.]

Photography now is of a sufficient age to permit of many of its earlier processes being reinvented without their lack of originality being discovered by a generation little given to the historical aspect of the science it professes. Scarcely a week passes that does not see formulæ given and accepted as a new departure which might be found already described in earlier photographic papers. Unfortunately, these formulæ are usually associated with their latest advocates' names, and henceforth the original author is entirely ignored. Too much credit cannot be given to those authors

who conscientiously look up their references when writing on any subject, and duly give chapter and verse—a practice gratifyingly on the increase.

Stand Development of the Eighties.

Stand development is one of the processes reinvented for the admiration and use of a later generation without any reference, so far as I can find, to its original introducers, Wratten and Wainwright, who described it about 1882 for use with pyro-ammonia. Such a method would, of course, at the present time meet with the immediate condemnation of the horological developers, but it was an eminently workable process, and gave highly satisfactory results. It was in daily use twenty-five years ago by several large commercial firms, who produced negatives of great excellence and uniformity by it. I, myself, first saw it used in the workrooms of Mr. J. Hudson, the photographic publisher, who used it exclusively for all sizes up to 12 x 10, and I have known as many as twelve dozen 12 x 10 enlarged negatives made and developed in one day by two persons using stand development with pyro-ammonia, on the lines suggested by Wratten and Wainwright. Of course, as has been said, such a method of work should, according to latter-day teaching, have been wholly impossible, but the negatives it yielded could not be surpassed for quality at the present time. Usually three dipping baths were employed by each worker, and the solution made up in the morning was employed throughout the day, being strengthened when half the day's work was done by the addition of dry pyrogallol and ammonia. A question will naturally suggest itself as to the color of the negatives, more especially when it is said that no "pyro-preservative" was used. A bath of alum and citric acid was employed between development and fixation, which bath was renewed as often as necessary, *i. e.*, when it failed to sufficiently clear away any stain. The appearance of the developing solution at the end of the day can only be conveyed by comparing it with the familiar "Guinness," yet the negatives had no objectionable amount of color when finished.

Some ten years ago I had several hundred stereoscopic negatives to develop, which it was necessary to accomplish expeditiously, so I decided to adopt Wratten and Wainwright's methods of dipping-bath development, using (instead of pyro-ammonia) amidol, which the makers of the plate (a foreign firm) recommended in preference to any other reducer. I was perfectly charmed with the facile way in which the plates developed and with the fine quality of the negatives. I used three baths, and the whole batch was developed easily in one day. This experience I mention because, quite lately, I saw a statement to the effect that amidol was not suitable for stand development. It may be that the plates were especially suitable for development by amidol, for I have known plates that would not give their best results when amidol was used.

A Pyro-soda Formula.

My interest in stand development was re-awakened last autumn on returning from a photographic tour with a large number of negatives to develop, and limited time in which to do it. I decided upon stand development with pyro-soda as the most convenient and expeditious. The exposures and subjects presented a pleasing variety, from one-hundredth of a second to several minutes on landscape and architectural subjects of every description. Three dipping baths were used, each containing forty ounces. The formula was:

Pyrogallol	20 grains.
Sodium sulphite	120 grains.
Potassium metabisulphite	30 grains.
Sodium carbonate	240 grains.
Water	40 ounces.

In a bath composed as above the plates developed with great regularity and steadiness, and exhibited that charm of stand development, no sign of the fully exposed plates "rushing up" and losing their scale of gradation.

Strengthening the Bath.

While the bath was fresh the developed plates were transferred, after rinsing, to an acid fixing bath, and the color of the negative was of a neutral gray without any sign of yellowness; but as the bath became more oxidized some color began to manifest itself, so the plates, after development, were placed for some minutes in a 1 per cent. bath of sodium bisulphite. When the baths commence to show signs of working slow, which naturally happens after several dozen plates have been developed, I find it advisable to renew them by the addition of sulpho-pyrogallol and carbonate; in fact, I allow half a grain of pyrogallol (plus its preservative) and six grains of carbonate to each half-plate, so that when some three dozen half-plates, or an equivalent of whole plates, have been passed through the bath, I add stock solution accordingly. This probably is rather a rule of thumb method, but it answers very well in practice.

Later on, having a large number of reproduced negatives to make, I gave this method of development a lengthy trial, and found it infinitely more expeditious and convenient than developing in a dish. The strength of the formula given above may, for reproduction work, be advantageously doubled, as the exposures can be adjusted to suit the quicker working bath. The plates used in making these reproduced negatives were of my own preparation, with a speed of about 100 H. and D., and gave density very readily, so, by keeping three dipping baths in operation, I was able to get over a large amount of work very quickly.

The length of time occupied in developing each plate with bath development and the formula given varies somewhat with the make of plate, and is of course largely influenced by the amount of working the bath is subjected to without strengthening. Using plates of my own preparation I find the time for each plate averages pretty constantly five minutes at about 60° F., and when this time is exceeded to any extent I take it as a hint that the bath needs replenishing by the addition of stock solution. Though I have little experience to speak from, I expect that most commercial plates will require rather longer than this.

If uniformity in working is desired, attention must be paid to securing constant temperature, and I find it necessary in winter to use a bath capable of holding the dipping baths and a sufficiency of water at a temperature of 60° F.

Now for years I had exclusively used tray development for all negative work, employing principally pyro-soda, but when I compare some nine months' work with bath development with my previous long spell of dish development, I find the balance of merit to be altogether with the bath. Of course, where only a few plates are in question it will hardly be desirable to make up the quantity of developer necessary for the bath, but a photographer usually has sufficient developing in hand to warrant at least the use of one bath. One great recommendation bath development has is the ease with which the plate can be left if any other work requires momentary attention; there is no need to mount guard over it; a

much pleasanter light may be used in the dark room; the baths may be covered up and white light used in the room at any moment; and the fingers are kept free from stain.

It will probably surprise many using bath development for the first time with pyrogallol to find that even when the solution has become quite deep-colored plates can still be developed free from stain therein. A good deal depends on the plate itself; the plates of one maker will develop quite free from color in a bath that will cause considerable stain with plates of another make. By using the acid sulphite bath between development and fixation it is not at all difficult to secure freedom from stain, care being taken to replace it with fresh solution when it becomes neutralized and discolored.

Freshly Made Pyro Solution.

One great factor in securing freedom from stain when using pyrogallol is the condition of the pyrogallol itself. Some time ago the editor of this paper drew attention to the staining proclivities of stock solutions of pyrogallol, and there is no question in my mind as to the correctness of his views. I have experimented very largely with pyro preservatives in the past, and long ago came to the conclusion that to secure freedom from stain it was necessary to use the pyrogallol developer freshly prepared. It may be convenient for the worker whose developing is intermittent to have a stock solution at hand, but for the daily worker the trouble of making up his developer before commencing work is so small, and occupies such a few moments, that he can well afford to consider himself independent of the vagaries and unreliability of stock pyrogallol solutions. Looked at with the light of later experience there is no doubt that a good deal of the success of the early workers with stand development was due to their method of preparing their baths with fresh, dry pyrogallol.

It may be urged that as long as there are non-staining developers to hand why not employ them for stand development and leave pyrogallol alone? I seriously question whether there is one of the more recently introduced reducing agents that, for all-round efficiency and moderation in cost, has any advantage whatever to offer over pyrogallol as a developer for plates; it suits every make of plate, which is more than can be said of several of the new reducers, and it has so firmly established itself in the photographer's favor that with it possession may well claim its proverbial nine-tenths.

WHAT ARE YOU IN IT FOR?

THE question asked oftenest at photographic conventions is what are we in photography for? Looking through an old copy of *Photographic Mosaics* we came across Mr. F. B. McCrary's answer. It is so much to the point that we reprint it for the benefit of our younger readers.—Ed. W. P. M.]

This question every photographer should ask himself every day. What am I in photography for? It will do him good, provided he is in it for honor, self-respect, and the money end of it; and, if not, this is not for him. But, if so, a few suggestions may assist him.

Now, the money end of it. Of course, that is what we are all working for, as is every other man in the universe that is trying to make a living. The question, "How shall I make a success?" is what the young man just starting in business should ask. I would say to

you, first, you must go where the people and money are. You cannot succeed in a little country village, making two or three pictures a day, and the rest of the time sitting around playing checkers; that will never do one any good. Work every day and every minute in the day.

"Well," you say, "what shall I do?" Keep yourself neat, your rooms neat, look after your specimen pictures all the time, put out your "best," and the next time still better, and change them often.

"Well," you say again, "How shall I make fine pictures and improve all the time?" By hard work and constant study of your profession. Read the best literature of your craft; *slight* no one; make the best you can of every subject. Remember that a poor picture from your studio will be a standing advertisement against you; think of this, and you will never let a bad picture pass your hands. By the study of fine paintings you will learn the principles of lighting, but in the work of the leading photographic artists is where you will learn true photography. Study chemical effects, and again I say study. Do not be a drone in business; remember always that to make a success, to win, to command a prize, you *must work and study*. Ask the men who stand on the top round of the ladder if they got there without it.

Much of your success is dependent upon your dark-room work. Be a careful workman. Take your brains into the dark-room with you and keep them there until you are done. Keep a good light to work by, one that you can use within six inches of you, so that you can examine closely the density, etc. Keep all your solutions as near 70° as you can, as much depends upon this.

Retouching.

This is the day of "Make me pretty;" "I will not have them unless they flatter me;" "You must take the wrinkles out;" "You must straighten my nose;" "Make me look fat;" "Give my neck and shoulders beautiful curves;" "I do not want my freckels to show, and by all means straighten my eyes," etc.

Well! well! if all this is to be done, how shall I ever succeed? Employ a first-class retoucher, one that is up-to-date, and you can do it. Unless you are clever with your pencil, or can afford to employ such a helper, you will not succeed. Study the work of the successful man, and you will find that retouching is one of the greatest factors in his success. If you have to have help, have nothing but the best; do good work; be sweet and nice to the "babies;" make them love you, be patient with them, and if you make a success of the children, your success with the rest of the world is assured. You must have a stock of toys to amuse them; they will expect to see something, for so their mothers have taught them.

A Few Don'ts.

Don't lose patience in the operating room. Don't make an exposure of your sitter until everything is right—then go ahead. Don't expose too short or too long. Don't stop with one, two, or three trials; don't make them all alike. Don't say "smile now," "look bright," and wear a frown yourself, or your subject will have it, sure. Don't pose the eyes straight in line wth the direction of the head; turn them a little to the right or left, as the subject demands. Don't allow anyone in the operating room while making a sitting, unless it is a baby, and then only one person. Don't allow any one to be a clown for you. Don't crowd your subject with furniture and backgrounds; it is bad taste. Don't pose your subjects so as to make them look dreamy and lifeless. Don't keep your place open on Sunday.

CONVENTION CRITICS.

BY F. R. BARROWS,
Treasurer P. A. of A.

In assuming the above title for this article, I do so only in an attempt to call the attention of the readers of this magazine to a few pertinent facts in the interest of photographic organization, and photography in general.

Conscientiously and without hope of reward I have given of time (and I hope some talent) from the best years of my life to the various State and local societies, with no personal object in view other than the betterment of photography.

From my long service in the national body it has naturally become nearer to me than other like organizations with which I am identified, and each of these I aim to support loyally. It is for this reason I now speak of critics, not in the sense of reproof alone, but for their encouragement. Conscientious criticism, well stated, is always for the good of either individual or organized effort. On the other hand, "gossipy critics" leave no good impression on the minds of their readers other than to evolve a spirit of unrest, which if led by one of persistence irreparable damage can be done to worthy objects and aspirations.

Repeated criticism of the National Association's treatment of prizes has been the means of crowding this measure to the front, and the Association may assume to instruct for a one line future policy, either for or against prizes at Dayton this year. This to my mind would be most absurd, believing it not to be for the best future interest of the organization. True, it would make the labors of the executive board less arduous, but what is the board for? Why should they serve if they are unwilling to give of their brain and their brawn alike in an attempt to meet the ever-changing conditions which in this age crop up. A wiser plan would be to take up this matter and instruct the board each year, leaving the Association in a state of progression rather than one of a fixed law which later might prove detrimental.

This subject alone is full of interest, and I am sure will be intelligently discussed if aroused, bringing out a good attendance of those who are vitally interested in disposing of this subject. Do not miss it. Be on hand and help to make this a lively session.

Criticism has also made a lively subject of the Academy project, which, if left alone as first outlined, would probably have slumbered into the sweet sleep of death. Originally the plan, as I understood it, was to choose a few select photographers and give them a title and the P. A. of A. was to be asked to indorse the plan to give it standing. This was getting the cart before the horse. If the P. A. of A. shall ever indorse the Academy idea it must be the one to organize the same, stipulating that no one shall be honored not a member of this organization.

State organizations should then work hand in hand with the "National," and prospective academicians should be presented to the "National" through their State organization. The New York local idea would be better still, as by selecting first in the local, then carried to the State, and from the State to the National for final approval. Coming from the local bodies first, only men of standing and reputation in their own community could get by. Then the honor would be of some value, as step by step a man would ascend, as in Masonry, to the coveted

goal. If ever we shall have academicians let the condition be one of rigid requirement for admission, including character, business reputation, years of continuous service in photography as well as in the P. A. of A. It is understood without saying that a man must be capable of making good photographs. Who could stand the test? Could you? Come to the Convention and see what is being done.

Criticism of last year's Salon exhibit, from the fact that the pictures were so varied in style, caused the board this year to change the requirements.

This brings the Salon exhibit down to the practical side of photography and will determine the standard of the bread winning side of photography. No class of work, however, is barred from our exhibition and for this reason we are assured that our complimentary class will be a most interesting collection of pictures.

For each successful exhibitor in the Salon class (there being twenty-five awards in all) they will receive a fine certificate of award from the Association, the only requirement being that the successful exhibitor shall be a member in good standing for 1907. These certificates will be presented to the successful ones on the afternoon of the last day of the convention. Do not fail to be there to get what is coming to you.

Added to the American collection will be one hundred and eighty-eight pictures collected and sent to the Association by our good friend H. Dührkoop, of Hamburg, Germany, an honorary member of this Association.

This collection comprises the work of thirty-five of the best foreign photographers and will be intensely interesting. If you would know what is being done abroad, see these pictures.

Criticism upon the question of allowing the stockdealer to become a part of our organization caused this question to be agitated last year at Niagara Falls, with the result that the Association unanimously settled this fact for a long time to come, that the manufacturers', dealers' and photographers' interests are one.

This agitation has kindled new fire in the dealers' department. At this writing every inch of available space has been disposed of to these people for the display of their wares, and their exhibits will be interesting and should not be missed. Come and see what the new things for the fall trade are to be.

Criticism of a dinner once given on a river-boat has kept this feature of the Dayton Convention somewhat obscured, but something will be doing for the hungry, if not at "Little Hungary," if you will join us at Dayton, August 6, 7, 8, and 9.

THE LUMIERE SINGLE-PLATE PROCESS OF COLOR PHOTOGRAPHY.

A NEW process for photography in colors has been brought out at Paris by Messrs. Auguste and Louis Lumière, who are among the leading *savants* of France in this department of science. They are able to take a photograph in colors upon a single plate and in an ordinary camera, with exposures of one second or less. This is done by the use of a specially prepared plate. The plate is formed by placing microscopic colored particles upon a glass plate and covering these with a layer of gelatino-bromide emulsions. Three colors are used for the particles, and they form the color screens for the plate. The

microscopic elements which form the light screens are made up of a transparent matter which can be divided into corpuscles of very small size and absorb coloring matter very well. It is found that potato starch is the best adapted for the purpose. The grains are sifted so as not to exceed 0.010 to 0.012 millimeter (0.0004 to 0.0005 inch) and are divided into three portions, colored respectively orange, green, and violet. After drying, they are intimately mixed and then dusted upon a glass plate covered with an adhesive coating. In 1904 Messrs. Lumière were able to place three thousand grains per square millimeter (about 2 million per square inch) avoiding all superposition. But spaces were left between the grains, which had to be filled up to prevent white light from passing. For this purpose an impalpable carbon powder was used, and under the microscope the plate showed colored disks upon a black ground. Since then the inventors have improved the process considerably. By means of the proper machinery they are able to deposit no less than 9000 grains per square millimeter (5.5 million per square inch) and owing to a rolling of the plate at very high pressure, the grains are crushed and flattened so as to form a colored mosaic without any empty spaces. The use of carbon powder is retained, but this appears only as a fine line. By this means we have a considerable reduction of the grain of the image so as to have a projection of some size without making the colored elements visible, and, second, an increase in transmission and a reduction of the time of exposure of the plate.

Thus prepared and viewed by transmitted light, the plate does not show any coloration, as the microscopic elements having the colors orange, green, and violet, combine so as to give white light. It now remains to sensitize the plate. The layer of colored grains is first covered with a waterproof varnish which has an index of refraction about the same as that of the starch grains. Then comes a layer of gelatino-bromide emulsion which is rendered perfectly panchromatic and is sensitive to all the colors.

The method of operating in the camera is as follows: An ordinary camera is used, and the lens has a color screen of special form such as is needed for the color-plate. The plate is placed in the plate-holder in the dark, with the back of the plate upward, so that the light passes through the granular layer before reaching the gelatine. Using a very luminous lens which can be worked at *f*. 3, for instance, the exposure can be lowered to $\frac{1}{4}$ second in sunlight, and at *f*. 8 good results can be obtained with one second exposure. To illustrate, we may take as a colored object the American flag with the three colors, red, white, and blue. The blue rays will be absorbed by the orange particles, leaving the greens and violets to act on the emulsion. Upon developing, the silver bromide will be blackened under the green and violet particles and the plate will be transparent under the orange particles. In the white part of the flag the light will not be absorbed and will give an effect on the plate under all the colored particles. When developed, we have the surface entirely black. As to the red rays, they will be absorbed by the green particles, but will pass by the violet and orange, and the latter portions will appear black. Such a plate when developed and fixed as usual will give the complimentary colors of the original, and the flag will appear in orange, black, and green. Theoretically, a second prepared plate applied to this negative should give upon development a positive image which shows the natural colors of the subject. In practice the result is not very good, because the sensitive layers

cannot be well placed in contact and owing to the inevitable loss of the brightness of the colors. The inventors, instead of fixing the developed plate as usual in the hypo bath, dissolve the reduced silver by means of the acid permanganate of potash method, then in daylight they proceed with the second development or reversal, which changes the plate to a positive plate and thus gives the actual colors of the object without needing a second plate. Thus in the first band the reduced silver bromide which stops off the violet and green particles (leaving the orange) will dissolve in the permanganate bath. Upon placing in the reversing bath, the non-reduced bromide will now blacken under the orange particles. These will be masked, and as the green and violet are now uncovered, their mixture will give the sensation of blue for the first band. In the same way the black band will become white and the green red, giving the original colors. For other shades of color the action is the same, and each colored particle lets the light pass which is needed for reproducing that special shade.

As to the manipulation of the plate, it is scarcely more complicated than for an ordinary plate. The first development by pyrogallic acid and ammonia is done in the dark quite automatically in a fixed time of two and one-half minutes, which can be timed by an hour glass, keeping the plate away from the rays of the red lamp. After a good washing the plate is plunged in a bath of acid permanganate and now white light can be used. In a few minutes the reduced silver is dissolved and the colors begin to appear, but they are faint. After washing, a second development is made by a diamidophenol bath, and this blackens the silver which is not reduced by the first development, giving a much greater brightness to the colors. After a rapid passage in a bath of dilute permanganate, the plate is intensified in a bath of pyrogallic acid and silver nitrate, when the colors become very brilliant. The plate is placed in neutral permanganate and then in an ordinary fixing bath. The operations are carried out rapidly and the whole takes but fifteen or twenty minutes to obtain the colored plate. As the gelatine layer is nine or ten times thinner than the ordinary layer, the washings are reduced to a few minutes, and the drying is very rapid. A special varnish is added which increases the transparence and brightness of the colors, and protects the plate.

If the manipulations of the plate are simple, on the other hand the practical difficulties in the manufacture of the plates were considerable. A sifting process had to be devised, which would give the grains of the proper diameter, then after coloring the grains they had to be well mixed so as to have uniform layer. The colors must be permanent, and the grains spread on the plate in a single layer. A varnish had to be invented which was waterproof in a very thin layer and having an index of refraction near that of the particles, and this was a difficult point. The gelatine layer must be as sensitive as possible and be panchromatic, but as the best of panchromatic preparations give a much greater effect for the blue and violet, a yellow screen is needed for the camera, of special composition.

One advantage of the new plates is that they give no halation. This phenomenon is due mainly to the reflection of the rays on the front surface of the glass plate, and the rays are sent upon the sensitive film with an intensity proportional to the thickness of the glass. Another cause is the diffusion of the light in the gelatine layer itself. In the new plates the first cause is quite suppressed, since the plates are placed backward. As to the diffusion in the

layer, it is scarcely appreciable, owing to the very thin layer which is used. For these reasons there is scarcely any halo, and operators can take interiors, cathedral windows with brilliant colors, and especially the glowing colors of the sunset.

The process invented by Messrs. Lumière thus marks quite a step in advance, and color photography will no doubt come into extensive use. Besides the great interest for amateurs, it will render service in the different sciences. Explorers will thus have geographic, ethnologic, and botanic data of value. In astronomy the new plates will be specially valuable for registering with scientific accuracy the colorations of phenomena of short duration, such as solar eclipses, Aurora borealis, solar halos, etc. In medicine we will have colored plates for anatomy and surgery. The time may not be far distant when we will be able to make colored photographic prints by an analogous method from such plates. At present, mechanical reproductions have already been made. *L'Illustration* was the first to demonstrate this and by the use of the well-known three-plate process it was able to publish some very fine views, in color, which for a first attempt are remarkable. Among these are a portrait of the king and queen of Norway, taken at Paris, also a view of soldiers, fruit and flowers, and a sunset on Lake Leman. A public demonstration of the process was made by the inventors at the lecture hall of the journal (*L'Illustration*, Paris) and aroused great interest.—*Scientific American.*

PHOTOGRAPHY FOR THE PRESS—THE "NEWS" PHOTOGRAPH.

BY JOHN EVERHARD.

In the year 1904 nearly 75 per cent. of the pictorial newspapers, journals, and magazines (I estimate these at 100) —dailies, weeklies, and monthlies— printed and published in London, were illustrated by pictures made with the camera, the remainder by the productions of the black-and-white artist. Hence, one might reasonably suppose that not only has the photograph for illustration purposes come to stay, but that it is gradually ousting pen-and-ink and brush drawings from their once almost impregnable position; indeed, the utility of the former is now so widely recognized that—excepting in the case of fictional publications—one might safely predict the abolition of the somewhat hypothetical sketch in favor of the more truthful photograph. We are living in an age which, despite its cravings after "sensational" and "impossible" literature, demands a very large percentage of truth in its newspaper illustrations; and the truth of the camera is undeniable. In making the latter statement I am perfectly aware of the fact that it *is* possible to "fake" photographs, even to an extraordinary extent; but my remarks refer solely to *unfaked* photographs—the requirements of every honest editor. At times truth is ugly; nevertheless, the present-day requirements are "undisputable facts," and a *true* photograph is distinctly preferable to a dozen sketches, no matter what the subject may be. About the sketch there is frequently (in a more or less degree) an "atmosphere" of "conjecture," but a photograph at once presents the "hard fact." The eye of the camera—the lens—does not repre-

sent the latest female poisoner as a creature of beauty, nor give to the hardened criminal a face five times more ferocious than it really is. Yet a few years ago, before the use of photographs for press purposes, it was the practice of the newspaper staff-artist to perpetrate such incongruities; even today, among a certain section of the sensational press, the illustrations are of a highly imaginative order. It is no easy matter to arrive at a definite conclusion as to the demands of the illustrated press; indeed, only by studying the question systematically is it at all possible to understand that journalistic puzzle—editorial requirements. Press photographs *must* possess certain characteristics, without which they are *practically useless* for illustration purposes. The *most vital* of these are known as the "tell-a-tale" and the "immediate interest" qualities. I propose, therefore, in the following chapters to discuss these questions carefully; to give the photographer some idea as to the disposal of photographs to the daily, weekly, and monthly papers, journals, and magazines; to suggest "ways and means" in all phases of press work; specialising, and book-illustrating, and information generally useful to the photographer wishing to take up press-work. While to the journalist seeking information as to the *production* of photographs, I shall have something to say on the methods of securing such pictures, and means of obtaining prints quickly and successfully; for there is but little doubt that photography has now some thousands of adherents among the great army of "salaried" and "free-lance" journalists.

The whole purpose and function of an illustration is to *force* upon the mind of the reader a clear conception of the incident described, and before discussing the requirements of the various publications we must first consider that perplexing question—What is a "news" photograph? A very popular novelist has said that "a photograph is a speech in print. It is the truth done by machinery." And these words sum up the qualifications of the "newsy" photograph. No one realizes better than an editor that one *good* illustration is worth two columns of "text," for an interesting picture induces many thousands of persons to purchase a copy of the paper. The most desirable photographs for illustration purposes, there fore, are those which in themselves tell some kind of a story, and which force unconsciously to the lips of the reader the words, "What an interesting picture!" You may assert in a two-column article that such-and-such a place is very quaint and picturesque, or that so-and-so has wonderfully powerful features, or that Lady —— is the most beautiful woman at Court, but the chances are that your descriptions will not "grip" the reader, or convey an *accurate* idea of place or person, unless accompanied by a truthful illustration—a reproduction from a photograph. And so the reader will understand that the first essential of a "newsy" photograph is—or, rather, should be—its *fulness of interest*, even to the point of *self-assertion*. (I must again emphasize the fact that I am now dealing with the "news" photograph; at a later period, and under separate chapters, I shall describe the uses of other classes of photographs.) We have already seen that a "news" photograph should be *full* of interest; but this is not all, for unless that interest be *immediate* (of the *moment*) the picture stands small chance of being accepted by the editor of a *newspaper*. Keep, therefore, the two phases, "tell-a-story" and "immediate interest" *constantly* before you.

There are many grades of "news" photographs—startling incidents, under which heading may be included all

street occurrences, fires, accidents, etc.; notabilities, of *immediate* fame, glorious *and* inglorious; public functions with notable personages, and all sorts of society gatherings; indeed, for the "free-lance" photographer there is an unlimited scope, providing always that he possesses the necessary skill and *perseverance*—or, to give it its correct name, *intrepidity*—for without a doubt some phases of press-work require more than an ordinary amount of self-confidence. The photographer attached to the staff of a daily newspaper will often be told to secure at all costs a "snap" of such and such a person, and frequently only by sheer consummate cheek is it possible to obtain the picture. But the "free-lance" is in a much more comfortable position; he can select his subjects, and is bound to no man to obtain a good picture, though for his own sake he will seldom fail. Of startling incidents there is little to be said. "Snaps" of these are only obtainable should the photographer happen to be in the vicinity; but nevertheless he will do well to set out immediately for the scene of any notable accident, fire, tragedy, etc., his object being to secure photographs showing traces of the occurrence. The more tragic and gruesome the scene, the greater chance will he stand of getting the picture accepted. It is no good submitting photographs which do *not* show something of the occurrence. The editor will tell you that he *must* have "facts" —nothing else will satisfy the almost insatiable demands of his readers for sensational yet truthful photographs. In securing photographs of notabilities, be very careful not to give offence. But when you *do* "snap" them, make the exposure when they are *actually doing something;* for instance, a picutre of H. M. the King shaking hands with a Crimean veteran would be of greater interest (which to the "free-lance" means of greater money value) than a snap of His Majesty driving away from the scene of the incident. An *entrée* to public functions, society gatherings, etc., may nearly always be obtained by writing courteously for permission, and stating your object. Do not "bounce!" Do not make yourself obnoxious to the police or servants (public or private)! A gentlemanly demeanor will carry the press-photographer through many a close-kept gate.

The journalist will not need advice on the selection of photographic "copy," his journalistic "nose for news" will scent possibilities at the very mention of public functions; though for his guidance I shall presently make a few suggestions regarding the camera, and subsequent operations of development and print-production. To the photographer, however, a few words as to subject, and means of getting at it, will probably prove useful. In most of the daily papers—the *Daily Telegraph* especially—a list of the numerous forthcoming events are chronicled some days in advance. In yearly almanacs the probable dates of events, such as race meetings, athletic gatherings, county matches (such as football or cricket) are recorded, and as all these are excellent "copy," notes of the most likely events should be made in a pocket diary kept especially for the purpose. Copies of *Who's Who* and *Hazell's Annual* should be in the possession of *every* "free-lance" photographer; the addresses of the most prominent men and women of the day will be found therein, and these are of inestimable value, not only for "snap-shotting" purposes for the daily papers, but in securing "interviews" (illustrated) for the weeklies, and "biographical" articles, etc., for the monthly magazines. I shall dilate in subsequent chapters on the weekly and monthly publications.

Some mention should be made of

the class of camera most suitable for press-work. The man able to withstand the eyes of an ever-curious public will find the instrument of the folding pattern, giving pictures 8½ by 6½ inches, of the greatest utility; but failing this, a 5 by 4 camera is a convenient size. The lens should be of *good* make, with a working aperture of F 6 or F 7, *not smaller;* the shutter of the focal-plane pattern; finders of the prismatic and sunk-in type; and the plates should be contained in a changing-box or dark slides. Forego the camera with elaborate fittings, also the apparatus that cannot be fitted up and the focus adjusted *almost immediately*. In street work, rapid change of focus is frequently essential. Especially when securing "snaps" of processions, public functions, etc., rapid change of focus, plates, speed of shutter, etc., are absolutely necessary. If possible, secure an elevated position along the processional route, but even here a hand camera will be found more suitable than instrument for stand use only. The latter statement is born of a painful experience. On one occasion I was using a stand camera, perched up at the back of a thirty-feet-high public stand. I had fixed the instrument on the top of the structure, but just beneath the camera was a long row of spectators seated. The event was the arrival in England of a certain war-worn hero, and I had been told off to secure a "snap" of him just as he left the railway station. But, alas! no sooner had he stepped out of the building than the unexpected happened—the whole row of spectators (the whole stand full, in fact) rose to their feet, and waved hats and handkerchiefs, completely shutting out my point of view. I just had time to almost wrench the camera from its many fastenings, hold it at arm's length above my head, release the shutter, and hope for the best. I *did* secure a snap, but ever after, on such occasions, I fought shy of stand cameras.

It is always advisable to focus some object beforehand—a stone in the roadway for preference, or something immovable—and as soon as your subject reaches that point, release the shutter. A few words on the shutter and shutter-speeds will probably assist the novice. For all press-work a focal-plane shutter is essential. The ordinary roller-blind or mechanical shutters, on account of their "slowness," are of very little use to the "news" photographer. But the great danger in the use of high-speed shutters is the tendency to shorten the exposure unnecessarily by using too high a speed.

Practice is the only means of acquiring a thorough knowledge of the intricacies of "snapshot" work; but I append a list of some of the most likely objects the news-photographer will be called upon to photograph, and also the exposures (approximately) necessary, the latter being the outcome of actual tests in a good light, with special-rapid plates and a rapid lens:

Persons, horses, vehicles, passing the camera *at right angles*, at ordinary pace, and at a distance of from 25 to 60 feet from the lens—one-eightieth second.

Persons walking quickly, vehicles moving at similar rate, horses trotting leisurely, etc., from 25 to 60 feet from the camera—one-one hundred and twentieth second.

Walking and foot races, horses trotting quickly, carriages moving quickly, at from 25 to 60 feet from the camera—one-two hundred and fortieth second.

Horses racing, athletic sports, etc.—one-three hundred and sixtieth second.

Note that these exposures were for objects moving directly across the front of the camera, *i. e.*, at right angles. For objects coming *directly toward you*, lengthen the exposure four times

(for instance, reduce one-eightieth to one-twentieth), also lessen the aperture of the lens proportionately. For objects moving only in *a half-right direction*, lengthen the exposure by one-half (reduce one-eightieth to one-fortieth), and reduce the aperture of the lens accordingly. Having selected a subject, all your endeavors should be directed toward securing a picture quickly. As soon as you have made sufficient exposures, get back to the dark-room. Before setting out on your photographic maneuvers, developer for bromide paper and also for plates should have been made up. A liberal supply of "glossy" bromide paper should also be kept in stock. The plate-developer I recommend for "snapshot" work is as follows: No. 1: Pyro, 42 gr.; metol, 36 gr.; potass. metabisulphite, 90 gr.; potass. bromide, 15 gr.; water, 15 oz. No. 2: Soda carbonate cryst., 3 oz.; water, 15 oz. For use, take equal quantities of each. An excellent developer for bromide paper is: Amidol, 60 gr.; sodium sulphite, 480 gr.; water, 20 oz., to which should be added 3 drops of a 10 per cent. solution of bromide of potassium.

Your plate being developed and fixed, you then wash it for ten minutes in running water, frequently turning it about. Immerse a piece of bromide paper and the negative in a dish of water. When the paper has become thoroughly limp, bring it into contact with the negative, beneath the water's surface; lift both out, and squeegee lightly. Remove the water marks from the glass side of the negative; lay the paper and negative (the glass side of the latter facing upward) on a flat board or bench; hold a lighted match about four inches above the negative for a few seconds (try four or six), according to the density of the negative; again immerse the negative and bromide paper in a dish of water; separate them; place the negative in the tank to wash, empty the water covering the paper away, and pour on the amidol developer. When developed and fixed, rinse the print in five changes of water, and squeegee lightly to a ferrotype plate, standing the latter to dry in a warm current of air. A dexterous person can develop a negative and produce a print in *thirty minutes*. In less than two hours from the time of making the exposure the "news-photographer" can be on his way to the editorial office, with a marketable print.—*Amateur Photographer.*

THE USE OF SALTS OF COPPER AS A MEDIUM FOR PRINTING.*

BY JOHN BARTLETT.

THE salts of copper have frequently been employed associated with other more sensitive chlorides of the metals as a medium for printing.

The pictures produced, though pleasing, are hardly of a practical value, the time required to make impressions under a negative being much more than that for silver or iron salts. It is well known that the basis of the platinum prints, that is the image produced on the paper, is really an iron image, a ferric salt being used to precipitate the platinum salt in the oxalate developer.

The idea suggested itself to make use of an iron image and instead of platinum to deposit copper upon it.

I wish here briefly to call attention

* A paper read before the Photographic Society of Philadelphia.

to a few tentative experiments, hoping to pursue the matter at a future time more thoroughly. The results, as you may see, are encouraging.

As with the platinum papers I make use of a ferric salt, which during the process of printing is reduced by the light to a ferrous state, and by having associated it with a cupric salt greatly in excess, during the process of development a deposit is made upon the iron image which is quite as permanent as platinum. Quite a number of tones can be had by slight modification of the developing agent.

The sensitizer consists of cupric chloride in excess ferric, chloride, and ferric nitrate; made decidedly acid.

The paper is even more sensitive than ordinary printing-out silver paper and about one-half less exposure is required.

The sensitized paper keeps indefinitely, but the exposed print must be developed very shortly after completion. The developer consists principally of sulphocyanide of potassium.

To understand the action of this agent we should remember that the image formed is the reduced ferric salt to a ferrous salt; the cupric chloride undergoing no change.

Insoluble sulphocyanide of copper is precipitated on the image, while sulphocyanide lies upon the unreduced salt of iron, which is taken up by the excess of the sulphocyanide.

The sulphocyanide of copper is a somewhat coppery colored image, not unpleasant for certain subjects, but it is possible to make a variety of tints from purple and brown to sepia, red, and black, by little changes in manipulation.

I have merely called attention to the subject now to provoke some discussion, hoping to pursue the experiments later on, when I shall report to the Technical Committee. I would suggest that those interested in technical matters might report their experience.

THE EFFICIENCY OF A SHUTTER.

THERE is a very widespread belief that a focal-plane shutter will enable instantaneous exposures to be made in all weathers and under any circumstances with the certainty of getting satisfactory results. This is a fallacy for which there has, of course, been some foundation, the foundation being found in two facts regarding this particular type of shutter. First, that it enables shorter exposures to be given than may be obtained with any other form of instrument; and second, that the efficiency of the shutter is higher than the efficiency of all other kinds. Efficiency, of course, means suitability to the work required to be done, but this is the general meaning only. The word as applied to an instaneous shutter has a rather more particular meaning. If the efficiency of a shutter is low, that shutter allows a small proportion of light to pass during a certain fractional part of a second's exposure. A shutter of high efficiency allows a large proportion of light to pass.

Three Types of Shutter.

The three main types of shutter that are in general use today, and those which we propose considering, are the roller-blind shutter attached to the lens, the sector-between-lens shutter and the focal-plane shutter. In order to get an idea of the way these shutters work, it will be well to make a diagrammatic model out of a sheet of paper, and this we shall describe in each case, taking first of all the

roller-blind shutter in either of the two usual positions; that is, just behind the lens or just in front of it. On a sheet of foolscap describe in the centre a circle about 2 inches in diameter. Now, on another similar sheet draw a parallelogram 2 inches by 3, and with a sharp knife cut out the opening. The 2 inch circle represents the size of the front of the lens, and the rectangular opening is approximately the shape of the opening in the rubber-cloth blind of the shutter. Now lay the paper with the circle on it on the table, and placing the sheet with the opening on the top draw it along so that the rectangular opening passes over the circle, and carefully note what happens. From commencing to uncover the circle to finally covering it again entirely, the upper sheet will move a trifle over 5 inches. From commencing to uncover to the moment when the circle is completely visible, the paper will have moved 2 inches, or $\frac{2}{5}$ of its entire travel. It will then move an inch, leaving the whole of the circle visible, and during the final 2 inches of its travel the circle will be gradually covered up again. As the circle represents the lens, it is quite clear that for $\frac{1}{5}$ only of the travel of the blind will the lens be fully open; the remaining $\frac{4}{5}$ will be on an average only half open, assuming that the paper is moved at a uniform speed for the whole of its travel.

Each Part of a Lens is a Lens.

When a portion of the lens is uncovered an image is formed over practically the whole of the plate, so it will be seen that if blurring of moving objects is to be avoided, the rapidity of exposure necessary must be measured from the shutter commencing to open to the finish of closing. Assume that $\frac{1}{10}$ second is the longest exposure which, with a certain subject, may be safely given to avoid blur, then during $\frac{1}{5}$ of that time the lens is fully open: $\frac{1}{5}$ of $\frac{1}{10} = \frac{1}{50}$ second. To this must be added, approximately, half of the remaining $\frac{4}{5}$ of the $\frac{1}{10}$ second (the exposure), which equals $\frac{4}{50} \div 2 = \frac{2}{50}$. Now $\frac{2}{50} + \frac{1}{50}$ equals $\frac{3}{50}$, so that the exposure, so far as light action on the plate goes, is actually $\frac{3}{50}$ second, instead of $\frac{1}{10}$ or $\frac{5}{50}$ second. The light action is only $\frac{3}{5}$ of what it would be were the shutter to open in time, remain open for the calculated exposure, and close again in no time. We therefore say the efficiency of such a shutter is low. It will be apparent that the longer the opening, or rectangular slot in the rubber blind, or sheet of foolscap, the less will be the relative times of opening and closing, but the faster must the blind be moved across the lens in order to get the same rapidity of exposure. It might be thought that long openings might be used; but the mechanical difficulties of constructing a light and compact roller-blind shutter, with a long opening in the blind and a powerful spring, are practically insuperable.

The Diaphragmatic Shutter.

To make our paper model of the very popular type of shutter which works between the two component parts of the lens, we must cut a circular opening in the centre of each of two sheets of foolscap. Properly speaking, both sheets should be moved in opposite directions; but the effect is the same if one sheet is slid over the face of the other. Practically the same thing will be noticed as in the previous case, the time of uncovering and covering being long in proportion to the time the full aperture remains visible. In actual shutters the metal or vulcanite plates are not provided with circular openings and moved across each other, but two cresent-shaped plates are employed, moving apart and then toward each other again to close the aperture. There is naturally a slight pause as the blades stop moving apart and before they commence moving together again,

and this pause somewhat helps the efficiency. It may be taken, however, as pretty certain that the efficiency is similar to that of the roller-blind shutter.

The Focal-plane Shutter.

In considering the focal-plane type of exposing machine, we must remember that the lens is fully open at the stop selected during the whole of the exposure. The blind of the shutter is, as the name implies, placed close against the plate, or as nearly in that position as may be possible. In actual practice the blind is usually about half an inch in front of the plate. To construct our model we may make a black dot on one sheet of paper, and then *across* the other sheet cut a narrow slot, say five inches in length, and the width of the distance between two of the ruled blue lines of the foolscap. Now moving the slotted sheet, so that the slot moves in the direction of its width, and not of its length, we shall notice that the black dot suddenly appears, is fully visible for a short space of time, and then suddenly disappears again. So with the shutter slit moving across the face of the plate, the light has passed though the full opening of the lens, and is waiting on the surface of the rubber-blind, so to speak, just ready to pass through to the plate as soon as the slit comes along and allows it. The actual exposure is the time during which the black dot of our model is visible. The more quickly the blind moves, the more rapid the exposure; the narrower the slit, the more rapid the exposure, and, of course, conversely. One secret of the focal-plane shutter's high speed is that the plate is exposed in sections, commencing at one edge and finishing at the other. The efficiency is high, being one as compared with approximately half or three-fifths in the other two types.—*Photographic News.*

METHODS AND FORMULÆ.

[THE current issue of the *Journal of the Photographic Society of Philadelphia* is an unusually interesting one. As the Journal circulates amongst the members only, we reprint the following interesting notes for the benefit of our readers who are not members of the Society.—ED. W. P. M.]

Seed Tropical Plate.—Mr. Jeffcott gave an interesting talk on several photographic articles just introduced. He mentioned among others the Seed Tropical Plate, which could be developed in a temperature of 90° without injury.

Tessar IC. He said that Carl Zeiss, of Jena, after years of experimenting, has introduced a new lens, Tessar IC., working at *f.* 4.5. This lens possesses a surprising flatness of field and can be highly recommended to those desiring a lens of this particular feature. Mr. Jeffcott read a letter from Dr. Alfred Reginald Allen, of Philadelphia, regarding the lens: "I have made a few preliminary tests of the new Tessar IC. No. 17. I am greatly surprised at the flatness of field at full aperature, which is *f.* 4.5. This equals the correction of the Series VIIA at *f.* 6.3. From *f.* 4.5 to *f.* 8 there is a slight change in focus, but from *f.* 8 on the focus remains the same. The correction for astigmatism is practically perfect."

"*Agfa Rapid Fixing Salt*" is a new fixing compound just placed on the market. By dissolving this salt in the quantity of water stated in the recipe, an acid fixing bath is obtained which shows marked advantage over any other.

First, it fixes much more rapidly than any other. Second, the duration of fixing is not materially longer as the bath becomes more and more exhausted. By making comparative experiments it has been ascertained that in a fresh bath the dry plate requires to be thoroughly fixed but one-half the time necessary with the best fixing bath used hitherto. This shortening of the fixing becomes still more marked in proportion as the bath gets more exhausted, so that with the tenth negative the rapid fixing bath requires but one-quarter of the time, and with the twentieth negative but one-fifth of the time necessary with the regular acid hypo fixing bath.

The New "Royal" Velox Paper having lately appeared on the market (in both special and regular grades), some trouble has been noticed in the paper becoming blistered. It is recommended that it is not wise to use the regular acid fixing bath for this grade of Velox, and the following fixing bath is recommended:

Hypo (crystals)	3 oz.
Water	16 oz.

In extremely warm weather a little alum solution may be added to the above in the proportion of: alum, 1 ounce; water, 50 ounces. With the above bath one need not fear softening or blistering when using Royal Velox in either grade.

Platinum Printing. Mr. Shreve spoke of the troubles often encountered in printing platinum paper; notably the appearance of comets, streaks, etc., on the finished print. After investigation, he had found that the trouble arose from minute specks on the negative, and found that cleaning the negative thoroughly removed the difficulty.

Mr. Chapman said that many of the troubles in printing arose from carelessness in working, especially from floating chemicals settling on the paper.

Mr. Jeffcott related an instance which came to his notice, where much trouble was found in printing a quantity of Velox paper. Specks, etc., of a purplish-blue color were observed on the prints. The trouble was traced to a copying pencil made of aniline dye, in the hands of a careless employee, the dust of the pencil when sharpened having been allowed to come in contact with the paper.

Mr. Goldensky showed a new ink eraser which could be used to improve platinum prints, especially the high lights. He also showed a new brush for mounting prints with fish glue.

He called attention to the faulty plate holders in general use, in nearly all of which the plates were not in register with the ground glass in the back of the camera. He suggested that some manufacturer should invent a plateholder to overcome this difficulty.

Varnish for Platinum Prints.—Mr. Goldensky spoke of the well-known beauty of wet platinum prints, and the objectionable dead finish of the same print when dry. He had used varnishes of various kinds to restore life to the prints, and recommended what was known as white spirit varnish. A lacquer composed as follows:

Gum sandarac	1 oz.
Oil lavender	¼ oz.
Alcohol	8 oz.

was found to be very efficient.

Sulphur Cement for Porcelain.—Sulphur, 7 parts; white pitch, 5 parts; bleached lac, 1 part; mastic, 2 parts; elemi, 2 parts; finely powdered glass (this must be as finely ground as flour), 7 parts. Melt the first five ingredients together by heat, and finally stir in the glass powder which should be shaken in through a fine sieve.

NEWS AND NOTES.

A New Glass.—It is announced from the Carnegie Geophysical Laboratory in Washington that quartz glass can be successfully manufactured, but the authorities of that institution decline to commit themselves as to its feasibility from a commercial viewpoint. The chief value of quartz glass over ordinary glass is found in the fact that it can be heated to a temperature of about 1000° C. without softening, and its expansion under ordinary heat is so small as to be almost a negligible quality. It thus can be heated red hot and plunged into cold water without in the least cracking. It has the distinct property of permitting the passage of ultra-violet light rays, making it remarkably valuable in photographic uses.

At the Carnegie Laboratory many methods of preparation were tried before definite satisfactory results were obtained. If the quartz was intensely heated, free silicon was deposited on the inside of the air bubbles, and the glass was spoiled. The final solution of the problem was found in heating the quartz to the melting point, about 4000° F., and then subjecting it to an air pressure of between 400 and 500 pounds. After this it was allowed to gradually cool. The air pressure squeezed out the air bubbles, and the result was a solid and clear mass of quartz glass. The plates so far made at the laboratory are only about three by five by half an inch in size. The bubbles are few, not over one-half a millimeter in diameter, and are not frequent enough to interfere with the use of the glass for lenses, mirrors, and other optical work. With more skill and experience the glass can be made without the flaws which confronted the workers.

The Platinum Deposits of California.—Members of the United States Geological Survey, who are now in San Francisco, are investigating the recent discoveries of platinum in several counties in California. A bulletin will soon be issued on the tests of black sands which were conducted on the Pacific coast and elsewhere more than a year ago. The inquiry was started originally for the purpose of locating rich deposits of platinum. The investigation developed that there is platinum in 120 places in the United States; but that some of the largest and most profitable fields for commercial exploitation are in Del Norte, Siskiyou, and Trinity counties, in California. Platinum is also found in considerable quantities in Plumas and Butte counties.

Bubbles in Photographic Lenses.—High-grade double anastigmats are made of Jena glass. It is impossible to obtain this glass entirely free from small air bubbles, which have, however, absolutely no effect upon the results obtained with the lens, beyond stopping a small proportion of light—in the most unfavorable cases not more than 0.50 per cent. If, therefore, an exposure of 100 seconds be theoretically correct, it would be necessary, if one wished to exactly compensate for the loss of light resulting from the largest bubbles allowed to pass, to give an exposure of one-fiftieth of a second additional. The defect—if such it can be termed—is consequently in application so insignificant that no complaints can be considered concerning it.

Marine Glue.—Indiarubber shreds dissolved to saturation in crude benzene, 1 part; shellac, 2 parts. Mix by aid of heat.

Platinum $34 an Ounce.—The year 1905 saw a phenomenal rise in the price of platinum and a greatly increased production in the United States. The annual report of the United States Geological Survey on the production of platinum, prepared this year by Mr. F. W. Horton, contains details of exceptional interest. It shows that early in March, 1905, the price of ingot platinum advanced from $19.50 an ounce to $21 an ounce, surpassing gold in value. On April 1, 1905, the price fell to $20.50 and remained firm at this quotation until February 1, 1906, when it jumped to $25 an ounce, where it remained until September 1, 1906, when it leaped to the unprecedented value of $34 an ounce. Mr. Horton's report also shows that the production of platinum in the United States increased from 200 ounces in 1904 to 318 ounces in 1905. This report is published as an advance chapter of the annual volume, *Mineral Resource of the United States*, 1905, and is distributed free of charge, on application to the United States Geological Survey.

TRADE NOTES.

THE Mirmont Photo Paper Co., of Glendale, Brooklyn, are making an interesting and unique experiment in marketing their well-known New York papers. They have secured a lease of the ground-floor store at No. 18 East 23d Street, New York, where they will carry a $1500.00 stock of photographic papers for the convenience of their customers in Greater New York. To the best of our knowledge this will be the only retail store in the world devoted entirely to the sale of photographic printing papers.

The store will be under the management of Mr. O. H. Hart, the Secretary of the company, assisted by a force of demonstrators, including Sam Oswald, George Barrows, and Bill Nye, who will demonstrate the papers to the studio trade as well as counter-demonstrations for the amateur.

We understand that, before the end of the year, the Mirmont Photo Paper Co. will open similar retail stores in Chicago, St. Louis, and Philadelphia. To meet the increasing demand for their goods and to be ready for any emergency the company has started to duplicate its entire factory outfit. This was begun on June 18, one year after we announced in these columns that the Company would rebuild their plant, which had just been completed only to be lost in the San Francisco disaster. Truly a double-headed Phœnix.

SEED, "From which Good Pictures Grow," is the title of a handy little guide to negative making for the amateur worker who uses Seed plates. The information is concise and practical and covers its subject very thoroughly. The various plates manufactured by the Seed Company are described in relation to their special uses. Many formulas and helpful pointers are given. It is a good little manual to have on hand. Free at your dealer's or direct from the Eastman Kodak Co., Rochester, N. Y.

WE are in receipt of a circular from The Anthony and Scovill Co. notifying the trade that they have brought suit against the Eastman Kodak Co. and the Lumiere N. A. Co. for an infringement of the Goodwin patent covering the manufacture and sale of film cartridges. We have also received a circular from the Eastman Kodak Co. to the effect that they will vigorously contest the matter in the courts, meanwhile taking care of their customers as well as themselves.

FROM George Murphy, Inc., New York, we learn that the new *Royal Carbide Developing Lamp* is selling very rapidly, the first shipment having sold out. The advantages this lamp has in not giving out any heat and not absorbing any oxygen from the air make it a very desirable lamp for the photographer who has a small dark room.

From the same firm we learn that the new *Non-Slipping Printing Frame* described in our last issue and then only obtainable in the 4 x 5 size is now obtainable in the 5 x 7, 6½ x 8½, and 8 x 10 sizes. If you use them once you will use them always.

WELLCOME'S *Photographic Exposure Record and Diary*, for many years the best-known English pocket-book of photographic information, is now obtainable in a special edition for North America. It contains more useful information for its size than any book we know. Amongst others there are chapters on Development, Restrainers,

Preservatives, Reduction and Intensification, Toning and Sensitizing Carbon Tissue; Light Tables, Classified Subject Tables, and an Exposure Calculator, giving correct exposure with one turn of the scale. Bound in red cloth, pocket-book style, with pencil and flap, it is a handy pocket size and well worth the fifty cents at which it sells. Can be supplied from this office. Postage, three cents extra.

THE AMERICAN PHOTOCOLORTYPE CO., of Chicago, send us two handsome colored picture post-cards made from water-color sketches; one a figure study and the other a flower study. They are both popular subjects and good sellers. The Photocolortype Co. point out that they are both within the scope of photography and could be produced by any photographer following instructions issued by the company. Dull days and quiet times are as good as any other for this kind of work and the field is unlimited. If the photographer would take up this class of work instead of waiting for sittings his bank account would be better off. A request to the American Photocolortype Co., 337 Dearborn St., Chicago, would secure copies of the post-cards we refer to.

EDITOR'S TABLE.

THE C. P. GOERZ AMERICAN OPTICAL COMPANY are very desirous of regaining possession of lens No. 200,000 of their manufacture. This lens is a Celor No. 2 and was sold in March, 1906, to a Chicago dealer and sold at auction by the receiver in the early part of this year. The Goerz Company will, of course, give the owner a similar lens or make any ample satisfactory arrangement with him in consideration of his returning the lens No. 200,000. They are anxious to regain this lens, as their Berlin office wishes to add it to its collection, which contains Nos. 1, 1000 and 100,000, and to which it now wishes to add the 200,000. Should any of our readers have this lens in their possession they will confer a favor on the Goerz Company by communicating with them.

RAILROAD FARES TO DAYTON. Mr. F. R. Barrows, Treasurer of the P. A. of A., advises us that the railroad rates to the Convention have been reduced from three to two cents per mile, making the rate the same as the certificate plan. The selling dates are August 4 and 5, and return limit August 10. This new arrangement evidently makes certificates and their endorsement unnecessary.

The Bulletin of Photography, published at Philadelphia, with Frank V. Chambers, John Bartlett, and A. D. Selliman as editors, is the latest addition to the photographic magazine fold. It is to be a weekly, and "will cover the field of weekly information, catering to the needs of photographers by being right up to the minute." Five cents the copy or $1.75 per year. We wish Mr. Chambers and his co-editors much success in their venture.

The Year-Book of Photography, 1907-1908. Edited by F. J. MORTIMER and published by *The Photographic News*, London. G. Gennert, American agent. 614 pages, paper covers; price, fifty cents. This handy annual is as full of practical and interesting information as ever, which is saying a good deal. The five principal articles deal with seascape and yacht, landscape, portrait, architectural and flower photography. Each article is by an expert and well illustrated. Many pages of formulæ and data are given. A new feature of this year's annual is a trade directory, which gives a complete list of manufacturers of photopraphic goods (English), with their addresses. It is well worth the fifty cents just to glance through the advertising pages, apart from the mass of useful information sandwiched in between.

Investigations on the Theory of the Photographic Process. By S. E. SHEPPARD and C. E. KENNETH MEES. Longmans, Green & Co., London and New York. Cloth, 335 pages and index; price, $1.75, post-paid. This is an advanced treatise carrying the investigations farther along the lines started by Hunter and Driffield. The work was first presented in theses by the authors in securing their degrees. We are glad to see the appearance of such books on the phenomena of photography. In this case, however, it is not a book we can recommend to the professional photographer in search of practical information.

ONE of our English contemporaries, in announcing the retirement of Dundas Todd, goes out of his way to make remarks about the American photographic journals and their "mildly effete condition." This would have more effect if it came from a more powerful source; but a magazine that has to prostitute its reading matter by cajoling its readers into securing new subscribers, offering books from an unsold stock as a reward, is evidently in a condition much worse than mildly effete. We may be "ancient and respectable" and "have to go after the advertiser," but we have not reached the stage of decrepitude where we have to go on to our hands and knees in an attempt to secure new readers. We would recommend the author of "*The Incomplete Photographer*" to put more life into his journal and possibly he may secure new readers without offering cheap bribes to the old ones.

By Hollinger, New York

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV SEPTEMBER, 1907 No. 609

THE DAYTON CONVENTION.

THE National Convention of the Photographers' Association of America should be a matter of very considerable interest and importance to the professional photographer. We wish we could see some signs of either.

A careful reading of the report of the Dayton meeting leaves us wondering whether the net results justified the amount of work and preparation needed to get a convention of this size together. The officers, as efficient and hard working as could be desired, have done their best to make a success; the press has done its best to boom the convention, but the fact remains that the attendance of *photographers* was small and the interest displayed even less.

Why was it that so many of the most prominent members of the profession preferred to be spending their vacations in Europe or at the mountain or shore resorts instead of at Dayton, at the Convention purposely arranged for in vacation time?

In a profession of such recent birth, and total absence of well-defined rules and regulations for its proper conduct, it is essential that its followers should meet on a common ground to discuss ways and means of advancing their chosen profession by means of a unity of action that only comes from a consolidated body. That the photographer did not bother himself about his National Convention implies one of two things: Either he does not recognize the need of a convention, or he does not agree with the present methods of holding conventions. We are inclined to believe he holds the latter view.

The Dayton Convention was run on the same lines as recent National meetings. A series of fairly interesting lectures were arranged for, an exceptionally good collection of pictures was gathered together, and the dealers and manufacturers attended in force and showed the latest and best apparatus and material on the market; but the questions that affected the photographers as a body were simply left alone. The Academy question was again handed on to be taken up next year; the question of the prize policy of the Association in its broadest sense is still an unsettled question though it was decided to give prizes at Detroit in 1908; copyright matters were not mentioned, and the Committee appointed to take up the matter of a great international exposition of photography was not heard from.

Our esteemed contemporary, *The Photographer*, implores President-Elect

Medlar to "heed the writing on the wall." We think it is, and has been for the past few years, a blazing electric sign showing in a brilliant and clear light the very deep rut into which the National Association has fallen.

A very hearty vote of thanks is certainly due the retiring officers for their self-sacrificing labors, which are not always rewarded. The new officers have been well chosen and are thoroughly capable. President-Elect Medlar, as a model Secretary, has had a good training for the important position of President, and we feel sure that he will fill it with credit to himself and honor to the Association.

The choice of Detroit for next year's convention is well made and guarantees a good attendance. We hope that Mr. Medlar can evolve plans for a convention that will bring back to the Photographers' Association of America some of its former popularity and usefulness. The times are ripe for some radical changes.

SINGLE PRINTS VS. DOZEN LOTS.

BY THE ASSOCIATE EDITOR.

CALLING recently upon Mr. William Hollinger, to secure the four splendid portraits reproduced in this issue, and kindly loaned us for the purpose with his usual willingness to help, we had a long and interesting talk on the price question.

After making due allowance for the enthusiasm and superabundance of cheerful optimism of Mr. Hollinger we came away more than ever convinced that his method of selling portraits on their merits and by the single print is going to do more for the elevation of photography as a profession than any National Academy or Daguerre Memorial medals.

Briefly put, the method is to make the best picture you can, make three or four or half a dozen negatives, ask a good price for the first print and a slightly lower price for duplicates regardless of the quantity required. Do less work for more money.

The sitter has for so long been trained to think of photographs by the dozen that he rarely thinks of getting them any other way, and unfortunately for the photographer he cannot always make use of a dozen portraits, so he defers the sitting until he has an increased demand for his pictures.

Good work will always bring good prices, but quoted in dozen lots it too often scares away intending customers. The same person who, needing half a dozen pictures, did without rather than pay $50.00 per dozen, could be persuaded to take one at $5.00 and five at $3.50 each, and would very probably take at intervals further supplies, making a higher expenditure than the $50.00 original balked at.

The dependence of a portrait selling upon its merits demands from the photographer the best he is capable of, it steadily improves his work, and keeps him at concert pitch all the time. On the other hand, an order to supply one dozen prints at a certain figure will necessarily have to be up to a certain standard to maintain the photogapher's reputation, but they need be no better than the standard set by the price quoted for the dozen prints, and consequently, they do not add greatly to his reputation unless they are his highest-priced work.

The photographer who works the single-print idea is going to be very much more interested in his sitter and in his work. He is not merely making a portrait to fill a dozen order, arranged for and probably partly paid for in the office below the skylight, before a plate has been exposed. His object is to get the very best results with the subject in hand, and then to rely upon the quality of his work pleasing the patron to the extent of a considerable order at good prices.

The Hollinger method does away with the proof system at a considerable saving of time and expense. Why send the customer an unfinished print that does not resemble in the least what he has ordered and has to pay for? They do photography more harm than good. Send your sitters finished prints and let them see what they are going to get. Reduce retouching and faking to a minimum—the tendency is toward the unretouched portrait. Get prints out the day after the sitting, and fill orders quickly and completely. The sooner your customer has his prints the sooner they get into the hands of his friends and the sooner he comes back for more. His interest only lasts so long, and good orders can be lost by delay and broken promises.

The Hollinger system has been thoroughly tried out for the past ten years on Fifth Avenue, New York City, where the greatest competition in this country exists, and it is today making more money and fame with less work than any other studio in the city. It has proved itself an unqualified success, and, as we said in the beginning, its wider adoption would do much for the betterment of photography as a profession. It will remove commercialism and add dignity.

THE NATIONAL CONVENTION.

Dayton, Ohio, August 6 to 9 inclusive, 1907.

FIRST DAY—MORNING SESSION.

The convention was called to order at 10 A.M. by President Clarence J. Van Deventer.

President Van Deventer introduced His Honor, the Mayor of Dayton, Calvin D. Wright, who welcomed the members in a long speech.

President Van Deventer: Past President J. M. Appleton, on behalf of the association will answer the welcome of the Mayor.

Past President Appleton: Your Honor, Mr. President and Ladies and Gentlemen, I do not care to take up your time with any address this morning, and yet I feel that I, on account of the number of years that I have lived in this beautiful city of Dayton, must join hands with His Honor in extending to you, also, greetings and a welcome. I can say this: That His Honor's welcome to you is a truly sincere one. He is a Dayton man, and while Dayton is more or less conservative, whenever the hand is extended to its visitor or to its prospective citizen, the hand is extended with hearty good-will and genuinely. So that whatever is offered to you in this city by His Honor and its citizens, comes from the heart.

President Van Deventer: The next order of business on our program is a lecture from our old friend, Robert Lieber, of Indianapolis, on "The Photographer from the Viewpoint of the Stock Man."

Robert Lieber's Talk.

Mr. Lieber: I rather seriously object to being put down for a lecture. I have been attending the National Conventions for a good many years, and this will be my maiden effort even in the way of a little talk to you, so that as I say it is a very serious objection I have to the term of lecture. I have on the stage here with me a very good friend whom all of you know, or a great many know, at least, Mr. W. H. Potter, and if you were to talk with Mr. W. H. Potter about national conventions for a length of time, say ten minutes, he would, in all probability, refer to the convention in St. Louis of 1886, when he was president, and the convention in St. Paul of 1888, when he was secretary. And I am confident that, if in after years you meet me at any place at the photographic convention, I will speak of the year 1907 when I then talked to you at Dayton, because the chances are, if you and I survive this effort, that the future members will have sense enough not to call upon me again for any talk to you.

Now I will say to you in advance that what I have got to say to you is going to be very short. I do that for the very good reason that I am told that the silver-tongued orator of Kentucky once gave. He was asked by one of his friends as to how long he could talk on a given subject. "Well," he says, "if that subject is something that I know something about, I can say all I have got to say in ten minutes; but if it is something that I know nothing about, I could probably keep on talking forever." So I will act on the egotistical theory that I do know a little about something that I have to say to you, and these few things that I do have to say to you I am going to say quick, so maybe they will get home. I am not at all afraid to talk to photographers, because I am told, and I believe it, that it is the successful photographer who comes to the conventions, and, consequently, I will stand before the successful photographers of the country, and I am confident, too, that if the photographer is successful, he must be a good-natured man. Now I do not believe that anybody who is not good-natured has any business in the photographic studio. Now I do not care what you do at home. You can beat your wife, and you can beat your children, but when you go down to your studio, lay aside all of that and put on the best face that you have. You expect your cases to have pleasant faces, and that is what they want to see when they are expected to put on a pleasant face when they come before the camera. So it is the sour man that is not wanted in a photographic studio, and my advice to him is to get out of it just as quickly as possible and seek another profession.

Of course, from the viewpoint of the stock man, you will readily admit with me that there has been a wonderful advancement in the general characteristics of the studios of this country. I can remember, and as I say, I still like to be classed among the young men, but I can remember the time when the average Indiana studio—well, the operating-room—if you got there along about noontime, you did not seem to know whether it was a dining-room or a kitchen, but it was true that the average photographer of the smaller towns in most of the cities had to get along as best he could with very little or meagre means at his command. All that is changed, and it is quite natural that that should have changed, because the advance in photography has been very rapid, and the general credit of the country and the general prosperity is advancing just as rapidly.

Possibly the greatest kick that I have against the photographer, in a

business way, is his lack of promptness. Now don't get too scared, because maybe I am not going to say what you mean. I mean lack of promptness in his own gallery. I did not mean anything else. So you need not be afraid that I am going to call anybody bad pay. I mean just simply in his own gallery it is the lack of promptness that costs him money. Now, then, I can go into the average studio of this country, and a woman will come in and she will have a sitting, and order from the proofs about three or four days afterward, and be told to come back about the end of next week. And she comes back about the end of next week, and she is in the dozen pictures that she has ordered. No, she doesn't get a dozen pictures at all, but she gets about three or four pictures, and then she is told to come back the next Monday, and then there are three or four more pictures ready, and then if she will come back on the following Friday she gets two more, and by that time she has trod the stairs so often that she doesn't come for what is left. Now, these pictures that you have stuck away in your atelier, just seven-tenths of them are due to lack of promptness in your own business methods. Now look what you expect of us. I have a customer, who through his lack of promptness and not taking care of the stock, will telephone me in the morning and wants some cards sent out on the noon train, and if by 2 o'clock they are not there, he is at the other telephone asking why they were not sent. Now then apply that promptness that you expect of the stock dealer, apply that to your own business, and I am confident that you will reap results, and I will tell you why.

A person gets a picture taken and orders a dozen, and he gets them all distributed, so he gets another dozen from the photographer. I will venture to say that if that entire dozen pictures are delivered to him, they are handed out in the first two or three days if he has them, and he is back to your studio with a re-order. Now we will take it for granted that he does not get them all at one time, but he gets a few at a time—the way it happens very often. What happens then? He gives John Jones a picture, and pretty soon Smith comes along and says, "Can't you let me have one of those pictures? I see John Jones has one of your pictures." He says, "Yes, I will, just as soon as I get some more from the photographer." Well, by the time he gets some more from the photographer he has forgotten he has promised Brother Smith any pictures, and Brother Smith doesn't get any picture, and you are out one picture you might otherwise sell. Now, then, there is just one point that I want to bring out right now that, I am most sure, if you will think, may interest you, and I realize that when I touch this subject that I am treading on the most dangerous ground there is to talk to a convention of photographers on. And that is the ticket scheme coupon, or whatever you may call it. Now, then, I am not going to argue with you whether the ticket scheme is good or whether it is bad, because if I started that argument I know 50 per cent. of you are going to be my enemies, because I don't care how I argue, you won't believe me any way; but there is one point on which I believe you do believe, and that is: if you do get out a ticket, have the promise on that ticket such that you are willing to make the photographs whenever the customer comes to your gallery. In other words, don't expect to raise every order that comes into your gallery, and do not have the price of your ticket so low that you are going to make a sour face when that customer comes in and insists upon having all you promised him. (Applause.)

Now, then, if a department store advertises a can of talcum powder for eight cents, which I am told is about two cents less than it costs, when people walk into that store and ask for that box of talcum powder, it is handed to you or them for eight cents, and that is all there is to it.

They don't look sour. They are not sore because you picked them up on the advertising; they gave it to you; they did not do that. They hand out the goods. Now, then, when you get out your ticket, and if you want to put out a ticket saying that by paying fifty cents to the agent and a further fifty cents to the gallery they can have three platinum pictures absolutely free from further charge, and some one comes in there and wants this, just exactly what you promised them, why, give them that. Don't argue with them. Give that to them. Show them what you have got, of course, but if they insist on having what you advertise, give it to them. Don't put out a ticket at such a price that you cannot give it to them at the price you advertised and shed tears every time you make that same sale. (Applause.)

Now, possibly, there is just one other thing. You are beginning to wonder whether I will make as brief an address as I said I would in the start. There is just one thing I am going to mention, and that is: that I think there is something that your convention should take up. The average photographer finds it necessary to do some advertising. Now, then, he has not got a great amount of money to spend in advertising, because his volume of business is not very large, and, consequently, the amount that he can set aside for advertising purposes is not very large either. My suggestion is for the National Association of Photographers to issue a small prize for the best-written newspaper advertisement and the best circular advertisement, this advertisement to be displayed at your convention. Now, the reason that I have for this is that the average photographer is in a town where possibly he has not a very good printer. And the value of advertising depends largely upon the manner in which this advertising is set up. If he could come to your National Convention and see a display of advertisements, the ideas of which he could make use of, I am confident that you have led him to his good and benefit as you can by the displays of pictures that you put up each year with ideas on circulars. I have seen circulars that are very, very fine and cost very little money. Why? Because they are set up well. Now, you can write to this man or that man if you see that advertisement at the convention and would like to have a copy of it, and then you can give that printer of yours in your town some idea how printed matter ought to be set up. Even if he had not got a big cast of type, he could set it up in a pretty design, and I do believe if this suggestion were taken up by your officers that it would be a very valuable proposition for the photographers at home.

President's Address.

C. J. Van Deventer: My friends, it is with pleasure I greet you on this our twenty-seventh annual meeting. I believe our association, like wine, improves with age.

What great changes have taken place in the methods of our profession in the past twenty-seven years you of the older school will know.

I have had my experience cleaning glass for the old wet-plate process and getting up at five o'clock in the morning to silver paper; you of the younger generation know nothing of these stunts when we had to juggle the silver bath and doctor the measles. Now, how

different! you open your box of plates, make your exposure and print on any of the many papers and develop or tone with the ready-made developer; but it still takes brains to do it.

Have we made any great advancement in the finished product of our skill? I say we have. Look about you at the fine examples of modern portrait photography, such as we have on our walls this year. There is that magnificent loan exhibit from our German co-workers, strong and broad in its handling, work that will be well worth your while to study.

I am proud of that collection of pictures, and think this association should show its appreciation of the efforts and compliment of our German colleagues by issuing to each exhibitor a certificate of honor, of which all are worthy.

I have only one recommendation to make you, that is some disposition of the prize question. When your committee reports on this subject, I hope you will consider it carefully, as it has been a difficult one for each succeeding board to dispose of. Last year I wrote to our regular exhibitors to get an expression as to how they stood; for prizes, or not. We counted only those who made a positive answer, and 60 per cent. were not in favor of prizes. That is the reason we have none this year, and I trust the number and quality of the exhibits this year will guide you is disposing of this subject for the guidance of future boards.

The twenty-seventh annual convention is now open and in your hands. In presiding over your deliberations I will endeavor to rule with impartiality.

Address of Clarence M. Hayes on the Limit of Prices.

I have been debating in my mind ever since our worthy president invited me to say something at this Convention, and kindly furnished me with my subject, "The Limit of Prices," whether he thought, perhaps, by reputation, I had run the gamut of them and might say something to the younger element that might be construed or dignified into information, or whether I would fill in time with a subject, that after all the rosy dreams on artistic betterment have been shattered by the omnipresent landlord and butcher's rough call, looks us square in the face.

What are you going to get in return for life's effort that is tangible and provides for the time when beautiful posing, artistic lighting and all their accompaniments are things of the past? The landlord and the butcher still remain.

To be able to tell the limit of prices in the lower scale is a pure arithmetical problem which can be solved only by the genius able to make men produce work and an indefatigable worker himself. The upper register knows no limit to the genius who can produce better than his fellow workers. The public is your mine and pays only the metal you seek. The man with an income of $1,000 per year is not going to buy the highest-priced photographs that are made, neither is the man with a $25,000 income going to buy post-cards at 50 cents per dozen—not when anybody sees him.

There is a place made for every man in this world, and he makes it himself. I don't believe that any man who ever lived under normal conditions and at producing age, that ever had an ideal and hung tenaciously to it through all the trials and tribulations that follow such a course, but who ultimately succeeded. Not perhaps to his ideal, but because, in following it out persistently, he grows with it and the first ideal is as far back at the finish as it was ahead at the start. A man doesn't succeed by saying, "I will charge so

much for my pictures," unless he conscientiously and persistently endeavors all the time to make something better than he has done before. In doing so his individuality becomes more marked. After all, when you get beyond the mathematician's figures on how to produce photographs, individuality is what people pay the most for. Does the person live who is capable of telling how much people will pay for individuality? The majority of us know how idle it would be to set a staple price on the work of an old master in painting. It is limited only by the price the last purchaser made. This sounds idealistic and dreamy without a knowledge of what is being done by the so-called "Highest Priced Photographers of Today." The matter of dozens is becoming obsolete, and they reckon in single photographs. The gulf between the mathematician and the artist is growing as wide as that between the house painter and the master of art. The chaotic condition of our exhibits at the last eight or ten conventions is as sure a sign as we need. Personally, I don't believe the subject of prices is a good question or a debatable one to be brought before a national convention of photographers. I don't believe it is a big enough or great enough question for us to give the time to as a body. The sorry lesson of failure tells best whether you are charging too much for an article. Every product of human labor and endeavor has a price which the maker and the purchase alone can estimate. The limit of prices concerns only the man whose only thought in regard to his work is how much will it bring in money. The man whose ambition is to better his products knows no limit. Therefore I say, when we come together once a year, the essential life of this association must be of a broad scope, as photographers in every walk of the profession steer straight for the exhibit. What for? To see what has been accomplished better than previous years and better than he can do himself. The manufacturers' exhibit furnishes the commercial end, fully.

To sum up as briefly as possible how utterly useless it is for one to conceive of a standard limit of prices, I want to use two illustrations which are up to the second.

I saw an advertisement in the last issue of one of the photographic periodicals which came to me Saturday. It read: "Position wanted by an experienced operator, perfect in posing and lighting; salary moderate." Think of it, gentlemen! What could you get for your pictures with an operator like that, perfect in posing and lighting?

On the other hand, I saw a coupon ticket last week in my own city which stated: "Superior cabinet platinum for 35 cents; satisfaction guaranteed."

Seriously, gentlemen, how long do you think either one will last? To my mind both are the extreme limit of prices.

After some remarks from Past Presidents Cramer, Potter, Hearn, and Holloway, the meeting was adjourned.

Second Day—Morning Session.

The convention was called to order by President Van Deventer at 10.15 A.M.

Secretary's Annual Report.

Frank W. Medlar:

Jan. 1, 1907. Rec'd on all accounts	$24.50
For floor space	1,830.00
For desk space	223.00
Advertising space	691.00
All other privileges for 1906 convention	32.00
Total	$2,800.50
Paid to F. R. Barrows, treasurer	$2,800.50

Outstanding accounts, $52.50, and I will say in this connection that this has been collected with the exception of $12.50, which is uncollectable.

President Van Deventer: We will have the report of the treasurer, Mr. Barrows.

Mr. Frank Barrows, treasurer (holds up book): I will not read it all to you. I will just read a part of it.

Treasurer Barrow's Report.

This is the statement for 1906, which occurs on the first day of each year. Our statements compare from that point. Our next report will be after this convention closes to January 1, 1907.

Cash on hand Jan. 1, 1906 . . .	$4.818.54
Rec'd from the secretary, as you have had from the secretary's report . .	2,800.50
Rec'd from membership and dues .	2,463.00
Sale from ladies' pins	47.25
Making the sum total of moneys handled last year	$10,129.29
Of this sum paid out on vouchers drawn by the president and secretary from 583 to 660, these vouchers are all numbered and recorded . . .	$5,757.55
Leaving a sum in your treasury the first day of January, A.D. 1907 . .	$4,371.74

In this connection I wish to say that each year these books are audited by an auditing committee and are approved both by the auditing committee and the presidents of the association.

President Van Deventer: I would like to say for our treasurer I have been on the national board for four years and have acted once or twice as a member of the auditing committee and know the reports of all your auditing committees and I know that Mr. Barrows' accounts have always been in excellent shape. You have heard this report, what will you do with it?

On motion by Mr. Bandtel, duly seconded and unanimously carried, it was decided that the report be received and accepted.

Treasurer Barrows: Excuse me. I will work. (Applause.)

President Van Deventer: It is with pleasure that I present to you what I think one of the best things on the program. It is with pleasure I introduce Professor Otto Walter Beck, who will lecture on "How to Make a Portrait Out of a Likeness."

(Professor Beck's lecture will be found elsewhere in this issue.)

What Shall be Done with the Salon Pictures?

Mr. Holloway: I want to place something before you for your consideration, and I will try and not take up much of your time, because I believe you are tired. I am going to put a few words to you and let you think them over. The first thing I want to ask you is, What has become of your last year's salon pictures? The next thing I want to say to you is that as one of the trustees of the Daguerre Memorial Institute, we stand ready to become the custodian of your salon pictures. It is rather ridiculous, to say the least, for a national organization to give salon honors when they have no salon wherein to keep the pictures. Think over it. Last year's pictures have been scattered in all directions. I believe it would be impossible to get those twenty-five pictures together now. Those pictures, in two or three years from now, would be a great deal more valuable than they were last year. And in justice to the exhibitors, and those whose pictures have been chosen, I believe it would be a wise plan for the national association to permit us to take care of your pictures for you—the salon pictures. We have a place for that. We have fine walls. They will be insured and kept intact from year to year. I would like to have you come prepared to express yourselves on that before this convention adjourns—as to what you would like to have become of these salon pictures; and in view of the fact that last year's pictures are gone and we can't find

them, it seems to me that the pictures this year, anyhow, should be kept together. The national organization, of course, changes from place to place, and they have no place where they can keep these pictures. These are the highest honors that have been bestowed upon the exhibitors this year, and it does seem too bad that they will be forgotten in one year and the pictures be gone and we cannot see them. I should like to have you be prepared to express yourselves, and I would like to have, before this convention adjourns, a motion made and carried that the Daguerre Memorial Institute become custodian of these pictures. We do not ask a cent from you. We want to do that for the photographers and keep these things from year to year.

Mr. Bandtel: I am very much surprised indeed to learn that the last year's salon pictures have disappeared and cannot be located. I was under the impression that the last year's salon pictures were to be properly taken care of, and that access to them could be had only by members of the association. I understood that they were to be published in this year's *Review*, and I see that there are some of them missing. I see that there are some pictures in the *Review* that were not selected in the last year's salon, unless I am mistaken. I believe that it would be no more than right to ask all of those who had salon honors last year to either furnish the original print from that negative, to the officers of this association, so that they can take care of these pictures and have them hung in the Daguerre Memorial Institute, or the officers can do so. For my part, I am ready to express my opinion right now as to this year's salon pictures; and that is, that immediately after this convention the officers of the association shall take charge of the pictures that were selected and either keep them or turn them over to the Daguerre Memorial Institute, to be hung and there preserved. I think we ought to preserve these pictures. I do not think they ought to be scattered all over the country and lost track of and lost sight of, so we can never point to the pictures that won honor in that way. It seems to me we have not only a temporary honor, but a continuous honor, given to those whose pictures were selected. And I would make the point to get, if possible, the originals of last year's salon pictures, and if not the originals, then duplicates, and turn them over to our officers, because it is of great value to them in the future. As Brother Holloway just now said, these pictures would be more valuable and interesting this year than they were last, and in the next ten or twenty years they will be just that much more valuable and interesting. What is more valuable than old pictures of the old masters?—and it will be the same with photography. The master photographers' work will increase in value as they get older. We are young. We are young as a profession. We are young as workers, but it is true that our great pictures that are selected each year are worthy to live and do the same things that the great paintings have done. They will continue to live if we give them a chance, but if we let them pass away from existence, or allow the negatives to be lost or destroyed, or allow it to become impossible for these pictures to be preserved, they will disappear; and we ought not to allow that to happen at all. We ought to preserve these pictures and I would suggest that all those who had salon honors last year furnish either a duplicate print or the original negative to our executive committee, so that they may be preserved. And I move, Mr. President, that the executive committee shall take charge of the

pictures of the salon this year and shall preserve them as they see fit—if they wish to put them in the Daguerre Memorial Institute, do it. The Daguerre Memorial Institute, as I understand, offers to take care of them.

Motion seconded by Mr. Schantz.

Secretary Medlar: You present that motion in writing, gentlemen, so there will be no mistake.

Mr. Hearn: I think it would be a matter of considerable importance to the executive board if they only knew one or two things. That is, who owns these pictures that have been honored for the salon. Second, as to the ultimate destination of these photographs that Mr. Holloway suggests; and third, Are these pictures to be used for our publication next year, or are they not? If they are, then, some control over the pictures should be had, so that they can be reproduced in next year's *Review* for the benefit of all of our members, to retain and to hold and to refer to in years to come.

Now the executive committee, as I understand it, had to go to those parties who were honored last year at Niagara and request their pictures, some of which were given to them vastly inferior to the one that they showed us last year; and this was owing to the fact that they could not redeem their promise, made at Niagara, to publish these pictures in the *Review*, because they had been published before by other journals. Now, I am not going to engage your publications at all. I don't want to blame them, for wanting to have their pictures published, but I do think it is right and proper to our executive officers that they should be supported in their plans for your benefit.

Mr. Parrot: I just came in to the hall a few minutes ago, and I hadly know what the talk is about. I presume it is along the line of pictures selected as the salon picutres for this association. It seems rather remarkable for this association to select pictures for salon pictures and then not see fit to take care of them. It does not look as though the association really thought that the pictures had a great deal of merit. (Applause.) It is high time indeed that something should be done whereby picture of this class can be properly taken care of, and I just want to second Mr. Holloway's talk in regard to the Daguerre Memorial. It would be our purpose in being the custodians of these pictures to at all times stand ready to turn them over to the officers of the national organization for whatever purpose they saw fit. (Applause.) If at any convention in subsequent years they desired to have these pictures on exhibition, showing the progress that had been made from year to year, the pictures will be theirs for the asking. (Applause.) And I believe that when this organization fully understands the purpose of the Daguerre Memorial Institute they will be only too glad to accept the offer as extended by Mr. Holloway as a trustee of the Institute. I thank you, gentlemen.

Mr. Hearn: I would like to ask if there is any information to be given as to who owns these pictures that have been honored. I think we ought to settle it—do they belong to the association having honored them, and is the disposition of these pictures at the disposal of the association who has honored them?

President Van Deventer: I think you will have to consult the makers of the pictures, who make the claim of ownership.

Mr. Lewis: I move you that the invitation given by the Daguerre Memorial Institute be tabled prior to the report of this committee, which I suppose will be made tomorrow.

THIRD DAY—MORNING SESSION.

President Van Deventer: Now we will listen to Mr. Koehne.

Mr. Koehne addressed the convention on "The Business End of the Operating-room," this address consisted chiefly in revealing trade secrets which were not considered desirable to be made public, he requested that it be not reported, and with the consent of the officers of the convention this was agreed to.

Detroit for 1908.

President Van Deventer: Mr. Koehne will announce the result of the ballot for location.

Mr. Koehne: In all, 270 votes were cast. New York received 1, Buffalo received 1, evidently Mr. Nusbaumer; 3 for Niagara Falls, 43 for Winona Lake, and 226 for Detroit. (Applause.)

President Van Deventer: The next order of business will be the election of officers. I would like to have the report of the nominating committee.

Chairman Sykes: Your committee recommends as officers for the ensuing year:

President: Frank W. Medlar, Spencer, Ia.

Vice-presidents: Ed. C. Perry, Fort Wayne, Ind., and A. J. Thuss, Nashville, Tenn.

Secretary: J. H. Evanoff, Salem, Mass.

I wish to say that your committee, in selecting the nominees, have been honest, sincere and have tried their best to give you men whom they thought would do you the most good and would look after your interests the best.

MELVIN H. SYKES,
Chairman.
J. S. SCHNEIDER.
JACK ROMANO.
BURT A. RICE.
E. E. SEAVEY.

Mr. Bellsmith: The office of the president of the Photographers' Association is an important one, not only as you see the president sitting there at our conventions, but he has much to do with the policy of all that leads up to our meetings, and therefore we should be careful in the selection of the man whom we put at the head of our association. That man should be a man who is a business man as well as an artist—a man of integrity; a man with some backbone; and such a man, gentlemen and ladies, I think we have in our friend and officer of this association, Charlie Lewis. Charlie Lewis has had a great deal of experience in his own city. He is an Ohioan, and from Toledo; and I am glad to say we had one of the most successful conventions we ever had at Toledo. He has been now a member of the executive board of this association for two years. He has served with distinction. He is a man and a diplomat. He is a man of good broad ideas and a good business man—a man that does not go after fads, but who goes for the very best that is in photography—a man in whom we can safely place confidence and the future destinies of this association. Therefore, ladies, gentlemen and Mr. President, I beg to place in nomination Mr. Charles L. Lewis, of Toledo, Ohio.

Mr. Sperry: I want to second that nomination, and in seconding that nomination I place myself in somewhat of an embarassing position, for both of these nominees are close personal friends of mine—men for whom I have the highest regard—and both, I believe, would make good executive officers; but there is a point that I believe has not occurred to most of you, that I want to bring to your mind. In years gone by I served for three years on this national executive board, and I learned

while there that there are certain rights and preogatives, certain relations that each officer bears to one another. When I say preogatives I mean what is known as the courtesy of the Senate. This courtesy extends to members certain precedents and certain rights that come to them from their close intimacy. Now, on this board it has always been an unwritten law that the first vice-president has the first right to the nomination for the presidency. Now it has been broken. Now, if this first vice-president is incapable, if he is not a man to whom you want to trust the association, very well; then put the second vice-president or the secretary in; otherwise, all things being equal, the first vice-president should have that office. Now, what is demanded in a president is, first of all, a good address; a man that can come up and talk and that you can hear; a man and a good executive who can form a resolution. Now, look the nominees over and decide that point for yourselves. But don't forget that there is a certain injustice in a lower officer attempting to crowd out the higher officer; and I also want to call your attention to the fact that Ohio has furnished some of the best presidents this association has ever had. Every resident all over Ohio is proud of his State. I am minded of a certain individual in Toledo who was going along one evening with a load so heavy that navigation was difficult, and a certain divine of our city came across him and saw him and assisted him to his feet and helped him on his way, and by way of admonition he said to him: "My friend, I hope that you are not a resident of this city, for the honor of the city." He said: "You ought to be proud that I can carry so much for the honor of the city."

And so I hope that every one of us will vote for Mr. Lewis for the honor of Ohio.

Mr. Hartzell moves that the nominations for p esident be closed.

Mr. Moore seconds the motion.

Mr. Barrows: May I correct a statement that I think is misleading to the audience, given in all fairness and fairmindedness by Mr. Sperry. When I speak of this I speak of it only to correct a statement. Either Mr. Lewis or Mr. Medlar, as you well know, I must work under when I shall take my office next year, under either one or the other that may be elected, and they both are friends of mine, for whom I have the highest love and respect, and I would not do either man an injustice. I have taken no part in the canvasses for either man. Each man understands me perfectly. I have been frank and open in my assertions to each man, and each man knows just where I stand. I am playing no double part, but I wish that you shall know that this matter of ascension to office is not an undeniable law. It is not precedent. When I say to you that we have an instance of a man who stands before this community and before the United States, and when the world has honored as one of the leading photographers of our country, a man respected by every man in the convention, a man whom I love most truly and a man whom I would lay my heart's love out for and die for, I say that man was E. B. Core, who was taken from the floor of your house, never having held office, and made the unanimous nominee of this convention and begged to be its president. Is it not true, Mr. Core?

Mr. Core. I bow my thanks.

Mr. Barrows: There is an instance of where a man was taken, because we loved him, from the floor of the house and made president of the convention, and we had to beg him to take the office. Another instance is our respected and worthy friend, George Holloway, who was taken from the secretaryship and

made president of the association, and who will bear out the statements which I make; and so I say to you that this law must be laid aside in your deliberations and treat the men upon their merits and your love for them. Treat them fairly and elect the man you want.

The motion that the nominations close was unanimously carried.

President Van Deventer: We will now hear the report of the clerks of the election.

Mr. Koehne: In all, 253 votes were cast, giving Mr. Lewis, of Toledo, 106, and Mr. Medlar, of Spencer, Iowa, 147 votes. (Applause.)

Mr. Lewis: I was beaten by a mighty good man. I want to say that as president of the association he will have the most hearty support that I can give him, and I do not know of a man I would rather be beaten by. I want to congratulate him.

Mr. Medlar: Friends, I am not much of a speaker. I want to tell you right now that this is the proudest moment of my life. You have elected a small man from a small town to represent what advanced photography stands for, and I believe I stand for it, and I believe I will give you the best administration that I can; and if I make mistakes they will be of the head and not of the heart. I thank you for the compliment.

For First Vice-President, A. T. Proctor, of Huntington, West Virginia, was elected; for Second Vice-President, A. J. Thuss, Nashville, Tennessee; for Secretary, J. C. Evanoff, Salem, Massachusetts, and for Treasurer, Frank R. Barrows, Boston, Massachusetts.

Fourth Day—Morning Session.

Mr. Hearn: You are possibly aware that last year at Niagara Falls a movement was inaugurated for the establishment of an Academy. The convention at that time authorized the President to appoint a committee to carry the project into effect. By a mere technicality in the way that resolution was adopted or presented I did not feel, as the executive at that time, authorized to appoint that committee, and though informed by a great many parliamentarians that the intent and the will as expressed by the Convention would be sufficient warrant for me to do so, I thought if the Academy idea was big enough and broad enough and right that it could stand investigation. I, however, did appoint a committee of consultation of about fifty people to meet at this convention for the purpose of gathering in a session to discuss the various things as to what they thought would be likely to be pleasing to the large body of professional photographers throughout the country. Owing to circumstances beyond my control the committee has not been in shape that I could get them together. Some were here today; some were away tomorrow; some of the representative men of our Associations were here at some times and at other times they were gone and others showed up. So it seems to me as though this large committee was unwise, so I would like to have the thing straightened out and to show that the National Photographers' Association of America is possessed of members of sufficient broadness of ideas, high aspirations and ideality, that we will ultimately form within our ranks a standard of photography by the establishment of an Academy. It is a large question and a thing that ought to be gone at carefully and slowly and worked out so that it will eventually be entirely satisfactory and to the best interests of all; in other words that no mistakes are to be made; I move, Mr. President, that a committee of three be appointed to handle this matter in the way that they may see fit, and present it to the next convention at Detroit.

President Van Deventer: You have heard the motion of Mr. Hearn that a committee of three be appointed to report upon this matter at the next annual convention in Detroit.

The motion on a vote was unanimously adopted.

President Van Deventer: I will appoint on that committee Mr. Hearn, of Boston; Mr. Harris, of Washington, and Mr. Appleton, of Dayton.

Are there any further committees to report?

Report of Committee on Awards.

Mr. W. S. Lively: We, your committee appointed to decide who was entitled to the award offered the manufacturer or inventor of best device, process, or improvement in photography during the past year, have carefully inspected the various valuable entries in competition and decide that there are two of equal merit: the Folmer Camera and the Towles Flash Machine.

We therefore recommend that there be an equal division of the prize and honors. Respectfully,

W. S. LIVELY,
C. C. PIKE,
F. SCHANTZ.

I will state here that we spent the whole day yesterday upon the subject, and I will say this, bearing in mind all important improvements in photography and processes, it was the hardest matter in the world for us to come to a decision, and especially so between these two. We could never decide which of them would be for the best interest of the photographic profession; hence, we had to divide the prize and honors.

Mr. Hearn: I move, Mr. President, that the report of the committee be accepted and adopted and the division made as recommended.

Motion unanimously carried.

Mr. Lewis: Would it be out of order at this time to decide whether we shall go on for another year offering an award of this kind for the same purpose?

President Van Deventer: There is to be a committee report on that Mr. Lewis and I are not quite through with the committees. I will ask for that committee report. While we are on reports of the committees I should like to ask for the report from the chairman of that committee that was appointed last year while in session at Niagara. I believe the chairman of that committee was Mr. Lively—the Committee on Awards, the Standing Committee on Disposing of the Prize question.

Report of Standing Committee on the Prize Question.

Mr. Lively: We your committee, appointed by Charles W. Hearn, President, 1906, by order of national body assembled at Niagara Falls, to take up the subject of a permanent system of awards for all future conventions until revoked by this body in regular session, respectfully report as follows:

The great necessity of establishing a permanent system of awards being apparent to all, for the following reasons:

1. In order to relieve the Executive Board of the immense responsibility that is entailed through the adoption by them of a policy (matters not what it may be) that will be criticized and censured by a part of the membership.

2. The Executive Board being the creation of the Photographers' Association of America and that body assembled being able to determine and dictate the policy of its next annual meeting, should do so and hold the Executive Board responsible for the carrying out faithfully the most important feature connected with either State or National conventions. Therefore be it resolved:

1. That there shall be established a National Academy Photographic which shall hold the same place in our profession that the National Academy of the brush occupies among the artists of the brush.

2. *Resolved*, that the Photographers' Association of America offer a badge or certificate of merit to all who succeed to such a degree or standard of excellence as may hereafter be determined by the judges hereinafter suggested.

3. *Resolved*, that those receiving the distinction of the badge or certificate of merit awarded by the National Association three times, be known and recognized as associate members of the National Academy Photographic.

4. *Resolved*, that each exhibit shall consist of not less than three pictures, and that the composition and general direction of the making of same shall have been done by the person in whose name the exhibit is entered. The selection by said jury shall entitle the photographer to the badge of merit and the picture selected become the property of the association.

Resolved, that the jury on awards shall be composed of five or more and they to be active members who are workmen of recognized ability.

5. *Resolved*, that no manufacturers' or dealers' prize shall be permitted to be offered or accepted for any exhibit in the Association art department.

Resolved, that in order to establish a closer relation between members of our profession, securing greater strength, a higher order of education individually and collectively, at the same time promoting and inspiring additional ambition, that we, as a national body, composed largely of State organizations, coöperate with all State associations by supplying them with a uniform badge or button of merit, to be awarded at their annual meeting to all regular members attaining a degree of excellence to be determined by a competent jury consisting of two, who shall be selected by the president of the National Association. Expense of same to be met by the State Association.

Respectfully submitted,
W. S. LIVELY,
D. D. SPELLMAN,
Committee.

There were three members on this committee, but the other was not here.

Mr. Hearn: Has the other member of the committee done any work in relation to that.

Mr. Lively: Now I want to call attention to the importance as I think of the two vital points in this report. One the establishment of a salon, the establishment of a degree in our profession that will correspond to that the artists of the brush have known by them as the National Academy. We do not want to throw restrictions around that degree in our profession that the artists of the brush do. They eliminate or limit the number that shall compose that National Academy to 100. It is absolutely impossible for an artist to become a member of that National Academy until there is a death in the Academy, that makes one place vacant, then the Association members come together and in a jury of thirty decide among the associate members as to who is entitled to that honor. Of course going with the degree there are letters appropriate to it, N. A., and the members of that academy are allowed to be designated by those letters N. A. Of course letters appropriate to the National Academy can be arranged here. This is just a starting point for the National Academy. It requires three years for it to come in, because we require the winning of this badge three times before a man is an associate member. When a man be-

(Continued on page 417)

By Hollinger, New York

By Hollinger, New York

By Hollinger, New York

By C. F. Townsend, Des Moines, Iowa

By C. F. Townsend, Des Moines, Iowa

New Studio of C. F. Townsend, Des Moines, Iowa

By Neue Photographische Gesellschaft Berlin-Steglitz
From "Das Atelier"

Four Poses by Alfred Pieperhoff, Halle a/S, Germany
From "Das Atelier"

HOW TO MAKE A PORTRAIT OUT OF A LIKENESS.

BY PROF. OTTO WALTER BECK.

At the Dayton Convention of the P. A. of A.

MR. PRESIDENT, LADIES, and GENTLEMEN:

To you, Mr. President, to your efficient staff, also to this city's school board, we want to extend congratulations for selecting this High School building in which to hold these meetings and to exhibit our photographs. The experience is a forerunner of what, in time, will happen all over our land. Although perhaps unaware of it, workers in photography are gradually being drawn closer to the great educational system of our country. The union will be effected as soon as the principles that underlie pictorial art are more generally understood.

At what point have we arrived in relation to this? In photography we have found out what is the difference between the copying process and that which really constitutes pictorial photo-portraiture; while in the schools the pictorial principle is being disengaged from principles that govern decoration. We believe that a service has been rendered to photography by the formulation of art principles that clearly state the differences between the subjects mentioned. We now know what art in photography is, and can work at its problems, thinking clearly and logically. We are on the right path. The public will be educated to an appreciation of art by our work, and its influence will reach far into the systems of the schools, public and private, at home and abroad. There exists at present no system that so effectively reveals the secrets of pictorial construction as the one our photography has evolved, and no mental training can exceed in value that offered by the analysis of a photograph having pictorial balance. It is well suited to the capacity of our scientifically inclined American in the studio or the college.

Does not a new light come to us when, looking ahead, we see art in photography working smoothly as a system in the great educational machinery of the world?

We are facing an incoming tide of new ideas. I say to men who advocate good straight photography, go on with it; it is sound and safe as photography, but he who places his sole reliance upon straight photography will remain upon a level with the copyists in painting. It is my conviction that good straight photography will always be the base, but that treatment of the plate is necessary. To bring mind and soul into the work, we must create. But you will say, "We do all that is possible under the skylight, we are careful in selecting the pose, then we take great pains with the lighting, and finally we choose the most suitable among the backgrounds —either the plain grade or ornamental effect." And I ask in turn, "Is that enough?" For let us test whether the truth of the camera is a picture truth.

Assuming an every-day experience, some one enters our studio for the purpose of having his portrait made. While conversing with him our eyes seek his gaze and in his eyes we read his thought, we form acquaintance with his disposition, his character. Through the eyes' communication we form the friendship that is to be perpetuated in our portrait of him, for the portrait must always express that kindliness, neatness and approachableness that affect us

as pleasing in life. We also observe his mobile features and the peculiarities of his figure, and our mind records with emphasis the characteristics to which we were impressionable. As for the rest, we have less distinct memories.

When we represent this man graphically, it is natural that what most impressed us shall be recorded with due prominence and that minor observations shall be treated with breadth, that is with an absence or control of disturbing detail. After that, we call to our aid our art-training, to make sure that the background and further treatment shall help the impression we have succeeded in recording. In fact, this treatment of the background is the poet's touch, giving to our portrait those qualities that enhance the beauty, invigorate the personality and make the whole representation satisfactory to our most fastidious tastes.

What does straight photography do with this same subject? The camera fails to reproduce the person as he appeared to us. It records a maze of detail, all over facts, as passionlessly and unintelligently as does a mirror. Because of this we have no pleasurable start, no emotional outflow. Instead, the mind reads soberly the disjointed records.

Notice in a good picture how you are not allowed to escape; how skilfully the artist has made you look back, always back, to what he wants you to see. On the other hand a straight photograph leaks in all directions; its strength is not garnered. If this be true, then behind picture-making there must be laws that we are to observe quite as carefully as we obey laws in chemistry. But in straight photography there is the belief that we have but to follow formulas for posing, lighting and screen backgrounds to make a portrait. Let us see whether we shall not change our views in regard to them. I will analyze the first. In the pose you seek to bring about naturalness. That is your whole aim, is it not? Unless, indeed, you elect to try the fantastic, or seek what you call "style," which is artificial and a great strain upon sincere art. But I must point out to you that although naturalness is good to observe, its rendering depends upon something more than photographing the natural pose. It depends upon a treatment of the abstract contained in the appearance, to render the natural, to portray character, to infuse "mood" and insure all those finer qualities that the portrait must have. This is the most important principle that underlies portrait work. If we can once gain this point of view our progress toward mastery in art will be rapid. If those writers who have recently criticised our art-educational work could but penetrate to this great truth, they would not try to stem a tide that is irresistible—for art education will surely replace opinion by fundamental truth.

I ask you to observe this pose of a man clothed in dark, and standing against a dark ground. What kind of a picture shall we make of him? Shall it be a poster, a snapshot, or a portrait? Aiming at the poster we so treat the representation that the outline and the mass of the body become the notes of importance, the head being of no more interest than any other section, whether body or background. In making a poster we follow picture-laws that are absolutely and completely at variance with portraiture. In the poster we aim to destroy the sense of "body" and of personality in order that other factors may lead.

If we want the snapshot, we focus on the man somewhere, and there is presented to us in the print a monotonous recounting of detail with no interest above the superficial.

To attain to portraiture our camera must be used with particular intelligence.

We must first conceive the portrait in the pose, and, secondly, we must develop the picture in conformity with this conception. Boots do not enter most into our notice, nor do details of dress or texture of cloth, when we are intent upon the personality of an individual, but the snapshot does take notice of them, and even with your best efforts to avoid it, good straight photography records them too prominently. We therefore have to learn how to repress the unimportant that we may give prominence to the sitter's striking features, whether mental or physical.

Being luminous, the flesh is a chief pictorial factor. Therefore the face and hands are to be especially considered, and we must make the utmost use of them, giving them prominence and subduing all else. Our eyes must be made to glide over all minor matter to the point having the portrait interest.

To illustrate, this man assumes a pose, standing squarely facing us, his hands being dropped to his sides. The art laws dictate that we shall so represent him that our eye will especially note his face. In this pose, however, the geometric placing of hands, head and feet makes the face only incidental, and brings into strong evidence the centre-line of his coat, with buttons. Therefore, the portrait is impossible with this arrangement, unless we are resourceful enough to make the background help us out of the difficulty.

When we change the pose, permitting one hand still to hang at the side while the other holds a scroll against the chest, we force the observer to follow these light spots in their order, the gaze resting finally upon the face, where it will be held. In this pose we have a good portrait opportunity, but there is a possibility that we shall lose it in the further treatment. I will speak of this presently.

Suppose we attempt to lay into this man's portrait a loftiness that we felt to be inherent in his character. How often you have met this problem. Have you been able to solve it? Is it not true that when confronted with the task of making a portrait of the unusual man, the man prominent in one of the callings of life, you have exhausted your ingenuity in using the pose, lighting, and the ready-made backgrounds in your effort to make him different from the weaker type of man? What would you not give to be able to bring out the life, the dignity, the power of such a man. Yet how simple are the laws that lead to an expression of these covered qualities. We have but to guide the observer's eye to the floor line. I do this by placing a large piece of white paper behind and at one side of his feet. This white spot is an accent drawing the observer's gaze to itself and from this point the eye climbs the figure to the first hand, across to the second, and then sways to the last and final point of interest—the face. Does the man not seem taller, possessed of increased dignity and firmness? Yet the pose has not been changed nor shall we alter it now, while producing an effect differing greatly from this one. Our aim shall now be to make the man appear shorter in stature. I place the paper previously used at his feet, behind and to one side of his head. Immediately your eyes seek his face, because it is powerfully re-enforced in accent. You see that face so intently that it appears to come forward and the man's expression assumes an eagerness and intimacy. He is now the "hail-fellow well met," who meets you more than half way, who does not stand on formality. This, of course, is a quality that is often desirable in portraits, but it is disastrous to introduce it when our minds are intent upon the embodiment of some essentially different trait.

But we feel that we can hardly give a complete expression of "intimacy" by the use of the full-length portrait. Have you not noticed that while your eye was drawn to the face you overlooked the lower part of the body? Because of this the man's standing is not firm, he seems physically weaker. If you want to remove such defects make a half-length picture and thereby get rid of the disturbing section. In the half-length, you can give as much weight to the "intimate" qualities as you like, in fact you may give full sway to your powers, and put into this more limited space such concentration, such technical handling as will insure a most brilliant result.

If you wish to avoid difficulties in character portrayal do not introduce unnecessary accessories. For instance, a man so dressed and posed as this one is difficult enough to render without placing a chair, table or plants at his side. Notice how the mass of detail in this chair so placed detracts from the attention the figure should have. It at once cheapens our sitter; he loses personality. Only when we have become masters in background arrangements can we use such accessories to advantage. You have often had this experience: A customer brings back photographs and says: "We agree at home that the likeness in these prints is pretty good, but we do not think the picture is natural, we do not like them." You, of course, know them to be likenesses about as good as you can get, but you express your willingness to try again. Carrying out your promise you make some other arrangements in pose, lighting and background, and in a way this objection has been removed. In the first instance you had stumbled upon some combination of lines that brought about an undesirable characterization, and in the second attempt you tried another scheme that happily minimized this unpleasantness.

Would you not wish to know what causes these unprofitable effects, and would you not look into the future with more confidence if you could see in your results the realization of your desires and impressions? I have seen the most refined women made to appear coarse in the photograph; children were rendered ridiculous and men materialistic by certain background arrangements.

I will bring about a materialistic characterization in the pose we have before us by employing just such a device as photographers have unwittingly used. Over the upper half of the background I throw a white sheet. This introduction of white has emphasized the chest at the expense of the head, bringing out the materialistic, the physical. The lower part of the body, being black, sinks into its dark ground, and the lighted flesh of the face drops out of notice into the white tone behind it. We have lost stability in the figure, and equally lost all chance to set forth the intellectual. How could any one care for a print of this kind, even though the likeness were faithful?

But how wonderful are the resources of art when we can re-establish fine portrait conditions by merely lowering this white sheet to within six inches from the floor. How the figure looms out again, how height and dignity have returned. We have the man triumphing over accessories.

Do not these demonstrations prove that a single pose can be made to interpret a variety of characters simply by a change of accents? Is this not an advance upon the former conception of the meaning and office of the pose? However, we must accept the fact that the best thought-out pose will not save the good straight photograph from appearing patchy, disjointed and unemotional, for which reason we must treat the figure and the background by working on the plate. These outlines formed by the dark clothes against

the white background create what you call marginal sharpness. Always misused in such cases by straight photography, it becomes a defect, for it cuts the figure loose from the background and destroys the atmospheric connections. In fact, marginal sharpness, uncontrolled, is the greatest enemy lighting has.

Fig. 8

See this outline drawing of a young woman. Each line is assertive: each enslaves the eye. Wherever our gaze strikes such a line we are impelled to follow it, much as a telegraphic message follows its wire. A line of this sort divides the surface; under no conditions will it unite what is on either side of it, and by its use only flatness can result. Since this is true, how can we expect to give the appearance of body to any human form represented with absolute marginal sharpness? It is necessary that photographers should acquaint themselves with a new factor, the descriptive line. As a help in making objects look round, this line is almost limitless in its resources. It is the greatest friend that lighting has. It fuses the body with the background and makes for atmosphere. It explains to the mind what the forms of the body mean, thus easing the mind's work and adding to the pleasure of the impression.

Fig. 9

Notice in this second drawing (Fig. 9) how we get an effect of lighting through the one agency of the descriptive line. This line crowning the hat is faint, because of the light on it; here it is a little firmer; here it is actually interrupted; at this point it is quite positive, and this lower rim of the hat has a powerful accent of dark. In this wise the hat comes to have roundness. Similar changes in the accents of the outline are to be found in the face, the neck, the hair, the arms, the hands and dress. For no distance does any outline maintain sameness of thickness. Wher-

ever we soften marginal sharpness the light seems to have effect, and wherever we leave it evenly mechanically hard light is absent. Therefore we cause all lines to change emphasis at all points and by doing so consistently we make forms round and give depth to space. The descriptive line is in a sense one form of gradation, and in gradation lighting has its being.

Fig. 10

Observe how gradation has been used in this face (Fig. 10). We have frontal lighting—the kind that is much in favor. The gradations in this plan of lighting are very subtle and give opportunity for increased expressiveness in the features, but there is danger that photographers will use too much shading. It frequently happens that because of this excess of shading, photographed flesh effects have a dangerous tendency to run into a hardness not characteristic of flesh. It sometimes amounts to a porcelain quality, or to a discoloration, as if the flesh in the shaded parts were of a kind dissimilar to that in the lighted sections. We should guard against this with particular care. Notice that in Fig. 10 gradation is everywhere present in the hat and the dress. Here, too, there is the constant play of shading and the descriptive contour aids the flow of forms, one into the other.

An effective lesson may be derived from an analysis of the background in this sketch. It is made with what we call house paints, and yields a dense, flat surface that rivals marginal sharpness as a destructive agency to lighting. It closely resembles your backgrounds obtained from the photograph of a screen. The texture of the photographic print is responsible for this unfavorable quality in your work. In this case (Fig. 10) the well-modelled face, hands, and figure seem to be placed against the background, but do not "take their place" in the space that a background should create. To accomplish this end we must produce depth, and so I now paint for you graded tones in the background to replace the former crowding wall effect. We notice a transformation in the picture; the figure seems to take new life; numberless characteristics and refinements have come into it. Let me call attention to some of them. A moment ago, all the forms bordering the surface-like background kept our eyes more nearly fixed upon their margins, and it was not possible for us to give ourselves to the full contemplation of the face. Now, however, the features of the hat have been subdued, leaving but one forceful accent at the lower rim, and this has been used to give much life and vivacity to the face. Behind the head, where the dark of the hair joins the half-tone of the background, an accent of particular value is formed. It is the foil to the face. Do you not notice its influence? See how reflection seems to take possession

of the young woman. We notice a stillness, in fact a mood pervades the picture. Every portrait should embody this high quality. The considerate, thoughtful expression is brought about by this foil. We can change this expression without so much as touching the face. It is done by using the same accents we employed while considering the pose. I paint for you on this left side a long, upright band of light, putting in a few details to check its movement. The face has entirely changed in expression. The thoughtful, considerate look has vanished, and has been replaced by an eagerness; we fairly feel the figure bending forward. The young woman shows an interest in things to come, and her eyes sparkle with expectation. I will make a third change of accents in the background, aiming to give this same likeness the characteristics of the aristocrat. Removing the former effect, and substituting a low, horizontal line, with gradations increasing from light to dark upward, there comes to the face a quality uplifting and removing the woman from us. The gradation is instrumental in imparting to her some strong emotion kept under control. A woman high-bred and reserved may be well portrayed by the use of this composition scheme.

I want to repeat with emphasis that the trouble with the camera is that it does not record nature as the human eye sees it. First, it records too much, and too confusedly, when portraiture is the aim; second, the camera's eye does see as well as does the human eye that studies. The human eye that studies changes its focus constantly, fixing the mind in turn upon each consecutive part. We then get the descriptive line that takes the place of the camera's marginal sharpness.

Nor does the camera amplify by giving our view of the person, which is a matter of supreme importance in portraiture.

What I have said is not a criticism of your work here in these rooms. There is nothing personal said or intended. I, as an educator, have analyzed photography, the most facile method of reproduction the world has ever known. You are all ambitious to make it a perfect tool. Pride, profit and position are involved. I have tried to lay bare the foundation; elsewhere, you have a guide to help you build up your art, and there are also at your disposal processes that will enable you to get all the effects needed in the new creative work. Taking up a photographic plate, I see that the image is recorded through density of film. Now, why should we not add to or lessen these densities at our pleasure? By doing so, we untilize what is best in the pose, and then we treat the plate until we have attained those effects I point out as essential in portraiture. When I look at your work I find such high quality, such good photography, that I feel nothing better can be done along those lines. It remains to achieve pictorial completeness. I believe, with you, that some of the needful effects can be in a measure secured by straight photography, but not in sufficient degree, and never with complete balance.

Why do you hesitate to go a little beyond straight photography? Whether you get density by direct skylight, or by using your fingers in distributing pigment on the plate or employing the reducer skilfully, what can sustain the objection? You will have observed by my work before you here that portraiture is not a copying of nature. The uninformed may not realize how true this is, but you have seen that there was a reason for each touch from beginning to end, for each omission, each accentuation. I do not say that artists consciously employ these reasons in

every work, but I know that through study they have acquired a knowledge far exceeding anything that I can put into words in this hour's demonstration. I urge that you will all adopt the habit of study, patiently experimenting; and in the course of time you will become familiar with the reasons, and you will work intuitively. Let us always keep before our mind the truth that good straight photography will give the likeness, but that the portrait grows out of elaboration. I refrain from showing you more than can well be used in your work for the coming year. There are, however, problems for us to solve so limitless in variety that we may well consider the expediency of organizing in order to help onward education among us. Progressively arranged lessons would certainly help in the practice of our art. We must get on higher ground and above commercial influences; for we must realize that our photography, if once launched in an endowed institution of education, will soon show an undreamed-of realm of invention and creation.

I have unbounded faith in the professional photographers. Holding this belief, for more than a dozen years I have labored with you to overcome photography's difficulties. I am convinced that photographers may become a greater power for good, and for the advancement of art, than our art school can ever hope to be. For the photographer is in daily living touch with every home in our land. His influence is unbounded, and its seriousness should not escape him. No higher ambition can beckon than the one that now urges you onward. Let us all join in advancing a movement that holds so much for the profession and the public. Let us make the advance-guard a strong one, let no one tarry in the rear. The professional photographer must become more than a taker of likenesses.

Price of Platinum.—From various sources we hear that the recent famine in platinum is likely to be relieved shortly. Last year, as our readers are aware, the price rose in a remarkable manner to the figure of $37 per ounce. The metal has so many unique qualities that it has become a necessity of modern life. Its capacity to withstand intense heat and strong acids marked it out as useful to the chemist himself long before the rest of the commercial world found purposes for it. But the development of the electrical industries has made further and increasing demands upon the platinum supplies of the world. The ignition apparatus of automobiles also consumes considerable quantities of the fire-resisting metal, and not many things—certainly not questions of dollars—are allowed to stand in the way of the automobile. The photographer's demands have also been considerable, and the consumption of platinum printing papers has been greater than the casual observer would think. But we understand that there has probably been little real decrease in the actual consumption of the metal, for the demands can hardly be merely temporary, since no efficient substitute seems to be available, but there is a very marked difference in the market. The stores seem to have got into the hands of "holders," of gamblers, in fact, and they are burning their fingers smartly. In April there was a decrease in the price of $5 an ounce, and this has now been followed by a further decrease of $7.50 an ounce. So that the metal fetches at the moment only two-thirds its price six months ago, while the accounts of new discoveries of deposits of the metal in Russia—the principal source of the supply hitherto—and in Canada will be good news to all interested in the metal, except the Paris Platinum Syndicate and its coadjutors in London and New York.—*Photo News.*

(Concluded from page 400.)

comes an associate member and a number of them get together then they can formulate their own laws governing that institution. We, as a body underneath it, could not dictate to them a policy upon which it should be run. Now the coöperation of the State Associations with the National and the National with them has got to be begun here. The State Associations are ready and willing to coöperate with you if you invite them to do so. There is only one way to do that and that is to recognize men who are in another Association in the manner that we suggested here. We realize that this is a beginning and that it is not fully developed and we have to have a beginning and that this beginning will enable the brighter minds to work out and arrange the thing so that it will be a successful organization and create coöperation and harmony among our profession that we have not today. Now it does not debar the manufacturers from making any kind of prizes they like to make. I am taking care of them in their own exhibits, but it does debar manufacturers from offering prizes on the exhibits in the art department.

Mr. Barrows: May I inquire whether this is a resolution that is to become an absolute law or is it a recommendation subject to the judgment of the officers?

Mr. Lively: This resolution will become a law if you all vote on it and adopt it. This does not conflict with any constitutional law that you have and the adoption of these resolutions by this body will become a law to the incoming executive board. This matter was presented to the St. Louis Convention three years ago and was left to the incoming board. The incoming board were opposed at that time and decided not to begin this policy. The matter has been talked and written upon in the journals sufficiently for this body to handle it intelligently at this meeting. If you take up these resolutions one by one and act upon them and agree upon them and adopt them your executive board will be relieved of this immense responsibility. I have no doubt that we will have then an incentive and inducement for photographers in the State Associations as well as in the National to come forward. We have a salon. We have no reception hall for that salon. The salon exhibit was sent back last year to the owners that made them and today is not in existence. We have no higher ambition; we have nothing to lead us on as the artists of the brush have; but when this academy is established there is a pinnacle for us to aim for. There will be an ambition and an increased ambition to go onward and upward and for the privilege of having letters affixed to our names, those of us who may be fortunate enough to reach that pinnacle and announce to the world that we are master workmen. It also places us in a position among the other professions that will bring us into recognition among them and it will give us a greater amount of prestige throughout the United States and the world. We cannot possibly ever expect to hope to accomplish anything doing as we are today and the coöperation of the State associations and the National Association will unite this profession and at the same time will promote a sort of fraternity through all this that will compare favorably with secret organizations. I thank you.

President Van Deventer: You have heard the report of the committee. It is in your hands. What is your disposition?

Mr. Sperry: There is a very important question involved in these resolutions. The question no doubt will be of good for the Association, but it is very unwise

and impossible for us to determine right at this moment whether it is best to adopt it. Here are less than 10 per cent. of the membership of the Association. I listened very attentively to that report and also to Mr. Lively's explanation, and it is not at all clear in my mind exactly what the report is. It is impossible to consider them without seeing them and thinking over them. Now this report can be printed. We can all have it and look over it and deliberate over it and I move that this report will be tabled until the next meeting.

Mr. Seavey seconds the motion.

Mr. Barrows: I would like to say a word. As I understand it this committee was to report on prizes and it has extended from our National Association down through the State organizations. It has also taken in the Academy which they were not instructed to bring in on this resolution. What they were instructed to do was to bring in a report on prizes. What shall we do on prizes and now we must either table it or have a new report.

Mr. Holloway: I do not want to take up much of your time and I may prove to be out of order, but I propose to get this out before I leave. I do not approve of a National Academy of Photographers unless it is laid down in hide-bound rules.

President Van Deventer: That is not a question before the house, Mr. Holloway.

Mr. Holloway: I know that, but the committee was appointed as to the best disposition of prizes last year. What would be the best to offer this year—and if I am out of order in regards to the National Academy—

President Van Deventer: You are on the National Academy. That is not a question before the house at this time.

Mr. Holloway: I believe Mr. Lively has been conscientious in his duties and the matter should be given every consideration.

President Van Deventer: You are out of order Mr. Holloway if you wish to talk on that question.

Mr. Cramer: I move that the resolutions be published in the journals to give every reader a chance to consider it.

President Van Deventer: That was suggested, Mr. Cramer.

The motion was carried that the report of the committee be tabled until the next meeting.

Mr. Barrows: I think now that we owe an apology to our committee for what we have done, but we have done the right thing. I now move that that portion of their report applying to prizes shall be taken up by our board and given due consideration, following as carefully as in our judgment lies to do the best thing for this Association.

Mr. Lewis seconds the motion.

Mr. Hearn: In seconding that motion I would like to say that I have the utmost confidence in next year's board that they will act for the good of the Association and that motion is best for us.

President Van Deventer: Mr. Hearn you are out of order. You did not second that motion. Mr. Lewis seconded it.

Mr. Holloway: It was stated in all the journals this year that this matter of whether we would have prizes or no prizes would be thoroughly discussed on the floor and every one who had remarks to make for or against the matter should get up and make them. Now, then, this is putting it in the hands of a commiteee and squelching us so we cannot speak our minds.

Mr. Lewis: This is the time I have been waiting for four years. I knew what Mr. Lively's work was. I thought the National Academy business would necessarily have to be tabled and I saw it was going to be tabled when I saw

Mr. Barrows come in at the right time with the thing we have on hand today and have got to settle now. Now the question is just opened to you by Mr. Barrows and seconded by myself. Now is the time to discuss it. I think I have expressed myself in the journals my own view pretty well. I think the committee that was appointed have done their work well and have possibly given a little more than we expected them to, yet it was all right. The part they have been referring to is the prize business—they have stated as well, clearly and positively as it is possible for anybody to do, and they have put it up to the convention in a good, practical sort of a way. Now let us discuss it and let everybody say what they want to say.

President Van Deventer: Discussions will be limited to five minutes.

Mr. Holloway: As I have started this thing in a certain way I want to tell you what I think about prizes and what I think about the no-prize question.

I have had some experience in association work and I have found to my satisfaction that the very men—the leaders of this country—who are condemning prizes today are the ones who are advertising their prizes at home. Now, then, that means something. The men who have received the most medals are tearing down and don't want us to offer any more medals because they become cheap. Why do they become cheap? There are too many men coming to the front. They are receiving medals. That cheapens their medals because they are new men receiving medals. They are apparently getting them and the leaders lose their interest, and yet in order to retain their popularity they advertise their medals. Now, then, I never was in favor of kneeling to the big guns of this profession, because when you simmer it down there aint any big guns in this country at the present time. At the present time the biggest gun in the United States today is a little man who comes from a town of 2500, because he has had the nerve and the courage to put up a picture and to compete against all comers. Our great men who have been receiving medals in the past either do not exhibit because they are afraid they might lose or else they want to discourage it so the other younger element wont come in. They had every opportunity to compete for that diamond medal. In so far as they did not it shows two things. It shows that they either want to discourage prizes, to discourage progress, or else they were afraid to make the attempt. They feared they would fail. The giving of prizes brings out all the best that is in a man and sometimes it brings out the worst. But when you bring out the best talent in a man and we see his work on the walls that is where we learn. When we come to a convention we ought to come with the object in view of only seeing the good things and profit by them. If we see the bad things in our fellow members we should shun them. We should pay no attention to them. It is true the giving of prizes creates political complications. These things are bad. But we should select judges—honorable judges, judges who should be known all over the country for their honesty—to judge the pictures at the national convention next year and the following years, and you would find the greatest exhibit of pictures that we have had for many years. And if you make the prizes, don't cheapen the prizes. Don't make them so cheap that they are common. Now I believe that I have expressed myself on the prize question. That is how I see it. There are men condemning prizes now that are advertising their own prizes. Now then I would say another thing. At the last conven-

tion we had prizes. Prizes have always been my hobby, and so I carried it through at the instance of the Executive Board. One of the men who entered for a prize did not get what he wanted. He is opposed to prizes, but he wanted that $600 most awfully bad. In so far as he did not get it he blames himself for printing his pictures in a medium that did not get the best results for the pictures. Now this is his fault, but he blamed the Executive Board for it. I believe I have said all I would like to say. I would like to hear from some others.

Mr. Appleton: I have been against the prize problem for a number of years. I am one of the prize takers. Most of the prizes I took were in the days when there were not many prizes to be gotten. A short time ago when we started off the art problem in photography the suggestion of elimination came from one of our lecturers and the boys all went down after elimination. They went clear to the bottom of the subject and brought up a lot of mud there was in it, and they eliminated it with a vengeance and so with the prize system. It was carried to a degree in which a prize is a worthless thing. Now if there is anything in a prize at all it is to lift the production into a higher field and into a higher plane. If it is not for that purpose then we make the prize purely a commercial feature. That is wrong, as when we had the prizes to the extent that there were not enough exhibits to take all the prizes. Brother Holloway will bear me out in that, for he gave me a prize over in Indianapolis because one was left and there was nobody to take it. (Applause.)

Mr. Holloway: I gave him that for coming, that was all.

Mr. Appleton: Now what I want to say is this: I have fought the prize system for one reason; that is, I think that the money devoted—which was a large amount in years gone by and sometimes it was as high as $2000, you know—if that was devoted more directly to educational purposes and to help in that direction, that it would do more good to the individual members of the Association, and then after we had reached a point that we should occupy in the realm of art, I believe that that is the point we are aiming for, when we have reached that place then it would be well enough to give the prize system again. But I say this, that we can have the prizes limited, even if it were one only, I would advocate the prize system because you know that will make the fellow work like the mischief to get that one prize, and the results will be a great deal more beneficial, and I think if we take this prize system beyond the reach of commercialism and put it where it belongs then I am an advocate and with you on that.

Mr. Sperry: Mr. Appleton stole my thunder, or rather he said just what I wanted to say, but there are one or two points that I might make. At the last prize convention, that was in 1899, there were 173 entries and 165 or 167 exhibits. Well that state of things rather disgusted the Executive Board and so they gradually worked out of that prize system, but there was some excuse for it. There were five divisions, Eastern, Western, Northern, Southern and Canadian, and in some of these divisions the entries were far below the prizes and in others there were a great many more entries. Now I believe that if the prize system—if prizes could be given in a proper way, that would bring a better exhibit than do salon honors or complimentary. Now if a man were asked to bring an exhibit as a complimentary he would simply get the negatives and go to his walls and say "I guess this will do," and this, and so on, and take it up and send it in. If he started early in the year to work for

a prize and wanted to get it, these pictures would represent the man far better and have far better value than his complimentary would have, and in that way the associate members would get more out of the exhibition than they would from a complimentary exhibit, and while that spirit of commercialism is bad, that spirit of rivalry and wire pulling I have seen, I think that in my experience in conventions it is bad, it is demoralizing, at the same time they will endeavor to get more out of that exhibit than otherwise, and I am heartily in favor of prizes if it can be arranged in a way satisfactory all around.

Mr. Barrows: Now there are many members of our association who have ideas and the time is limited and as we are only taking up time here discussing this matter and as we would like to hear from every member of our Assotiation, some 3000, and the Board wants to hear from every man, I move that a prize of $25 be given to the best article on prizes, to be submitted to the Board, to the Secretary of this Association before the meeting of next year, in January, and this prize article to appear in the *Review* so that all may read it, and if this amendment is adopted —

Mr. Lewis: The motion is out of order.

President Van Deventer: The objection is well taken.

Mr. Holloway: I want to say one word in addition and that is that I am heartily opposed to the awarding of a cash prize from our national association. I think it is a mistake (applause). I think we ought to have an adopted design for a medal and that be held sacred and the award be made of a gold medal with an adopted association design upon it, and that be held as of sufficient value and hard enough to obtain that it will be more useful both as a symbol to the man who gets it and as a commercial value to him than any thing else we could give him, if it be $1000. I would, therefore, suggest to the committee that they do not offer a cash prize.

Mr. Galling: I would say a few remarks bearing upon prizes as to my experience in the Northwest. We are having an organization over there with a membership of about two hundred. The Northwestern Photographers' Association have prizes for Minnesota, North and South Dakota, and part of Wisconsin. We have tried alternating. One year we have prizes and the next year we do not have them, and for several years we have tried that system and we found that the year where we had prizes was the most successful for the number of good exhibits. In this last we have adopted a system of prizes according to the size of the town. A will be a town of 200,000; B will be for about a size of 50,000 and then down to 5000, and on down to 2500, so that each photographer competes in his own line. Now it would not be fair to take a photographer from a small town of 2500 and have him compete with the big man in a city like New York, Boston, or Dayton.

A voice: Doty won this year; I don't see why not?

Mr. Galling: I just want to make the point that the system of prizes has been found satisfactory in that we found that it brings out a most complete exhibit and it brings out more from the photographer.

Mr. Lewis: May I ask if I understand this thing right? We started out when you asked for a report of the Resolution Committee; that is, Mr. Hearn got up and suggested that the Academy feature be left in the hands of the committee of three. Then follows Mr. Lively's report that we are now discussing.

President Van Deventer: That is the discussion before the house at present.

Mr. Lewis: And it was tabled by

motion and carried. Now then, the feature from Mr. Lively's report that referred to the Academy was by Mr. Hearn's motion placed in the hands of the committee, was it not? Therefore, we cannot today by the action of Mr. Hearn, we cannot take up any more of Mr. Lively's report than we are discussing now.

President Van Deventer: Just the prize question is before the house now.

Mr. Lewis: Some people might think that Mr. Lively's report after that time was entirely tabled and done away with. Whether the proceedings are correct parliamentary proceedings I don't know. We are taking up a section of the report that is really tabled, are we not?

President Van Deventer: We are discussing the report of this Committee and the prize question.

Mr. Lewis: We are discussing a section of Mr. Lively's report that was tabled.

President Van Deventer: We are discussing the prize question and that is the only part we can discuss now.

Mr. Lively: There might be some difference between myself and these others. And there is a difference. I believe in more prizes. I believe in not limiting the number of prizes that you have got to give and not in making a maximum number or a certain number. For instance, you have offered a salon honor and say there must be twenty-five pictures selected. Suppose there are not twenty-five good pictures in that salon and deserving of salon honors, you have got to give twenty-five honors when there may only be ten, fifteen or twenty. Again, there may be fifteen or twenty over the twenty-five that are deserving of salon honors; I do not believe in limiting the number of prizes that you give but give a prize wherever the work is such that it demands it. My plea has been, instead of offering one prize in a class, to give the members that reach a certain grade of excellence a prize of some intrinsic value and it is giving it as an association prize from this Association, and at the same time it gives a man a standing in the fraternity. I would like very much to see that matter investigated thoroughly by the Board so as not to eliminate and not to put in pictures possibly that might not deserve it.

President Van Deventer: Now this matter is in your hands. I think it has been thoroughly discussed. You thoroughly understand this and I think the suggestion in the motion of Mr. Barrows is broad enough that your next Executive Committee will take due consideration thereof.

Motion reads as follows: I now move that that portion of their report (Committee on Resolutions) applying to prizes shall be taken up by Board and given due consideration following as carefully as in our judgment lies to do the best thing for this Association.

Mr. Barrows: Taking up their report we will follow their instructions as closely as we can.

Motion carried unanimously.

Mr. Lewis: We do not seem to have arrived at exactly the correct instructions yet for the incoming board, but I imagine for one that the concensus of opinion here is that the prize system is a proper system but not the money method. You recognize merit without giving cash prizes. Now, then, to further draw out the best minds on this subject, from the fact that we have not many here this morning, I should make a motion following the suggestion of Mr. Barrows to offer a prize of $25 for the best article during the coming year along this prize question, and the prize article should be brought to the attention of the Board in January at their meeting and shall be published in the next issue of the *Review*.

Mr. Butler seconds the motion.

Motion unanimously carried and adopted.

The last act of the Convention was the presentation of certificates to the winners of salon honors. The presentation was made by Past-President Appleton, of Dayton. Certificates were awarded to the following:

Baker Art Gallery, Columbus, Ohio; A. L. Bowersox, Dayton, Ohio; Byrd Studio, New Cambridge, Mass.; E. E. Doty, Belding, Mich.; Dudley Hoyt, New York City; J. H. Field, Berlin, Wis.; C. M. Hayes, Detroit, Mich.; Alfred Holden, Philadelphia, Pa.; Miss Belle Johnson, Monroe City, Mo.; T. Kajiwara, St. Louis, Mo.; Knaffl & Bro., Knoxville, Tenn.; C. L. Lewis, Toledo, Ohio; J. C. Mock, Rochester, N. Y.; C. D. Neiswanger, Muncie, Ind.; W. E. Newton, Oberlin, Ohio; Parrott, Fort Wayne, Ind.; Perry & Brecken, Allegheny, Pa.; Jane Reese, Dayton, Ohio; C. W. Scheide, Elyria, Ohio; J. C. Strauss, St. Louis, Mo.; Melvin Sykes, Chicago, Ill.; Jos. Thibault, Fall River, Mass.; Thuss Bros., Nashville, Tenn.; Geo. H. Van Norman, Springfield, Mass.; Young & Carl, Cincinnati, Ohio.

The Convention was then adjourned until the date set for the Detroit meeting.

MANUFACTURERS AND DEALERS AT THE CONVENTION.

THE manufacturers were unusually well represented at Dayton and made an attractive display of the latest apparatus and material.

The awarding of the hundred-dollar prize offered by the Association for the best invention of the year gave the judges a very anxious time. They finally divided the prize between the studio graflex camera, manufactured by the Folmer & Schwing Co., and the Towles-Schofield studio flash-lamp. Full descriptions of both pieces of apparatus will appear in our next issue.

Amongst the manufacturers represented were the Eastman Kodak Co., American Aristotype Co., Anthony & Scovill Co., M. A. Seed Dry Plate Co., G. Cramer Dry Plate Co., C. P. Goerz, American Optical Co., Voightlaender & Son Optical Co., Bausch & Lomb Optical Co., A. M. Collins Manufacturing Co., Prosch Flash-Lamp Co., Carl Ernst & Co., New York; Hammer Dry Plate Co., Seneca Camera Co., Wollensak Optical Co., Burke & James of Chicago, Bridges Manufacturing Co., Rochester; George Murphy Inc., New York: Defender Photo Supply Co., Berline Aniline works, Curtis & Cameron of Boston, The Artura Photo Paper Co., Dresden Photo Paper Co.

The magazines represented were: *The Photographer, St. Louis & Canadian, The Bulletin of Photography, The Camera* and WILSON'S PHOTOGRAPHIC MAGAZINE.

Carbon Paper which will Keep.—Photographers who sensitize their own carbon paper generally experience great difficulty in getting it to keep for any length of time, especially in hot weather.

The keeping properties are greatly improved by the addition of 1 per cent. of salicylic acid to the sensitizing bath.

Salicylic acid is a tremendously useful substance to the photographer and others though its properties are little appreciated outside the druggists' shops. It is one of the ingredients of corn-cures, is used in many hair-restorers, and is to be found in most of the popular grippe cures on the market.

CONVENTION OF THE PHOTOGRAPHERS' ASSOCIATION OF CANADA.

THE Photographers' Association has taken a new lease of life and emerged from its ten-year spell of inactivity. The Annual Convention was held in Toronto, July 24 and 25, and was a great success.

Taking a leaf from the New York Society's book, a labor bureau has been established for the mutual benefit of members and employees.

Mr. S. Lawrence, of the Bausch and Lomb Co., gave his illustrated talk on "Lenses," and Mr. W. S. Lively, of the Southern School of Photography, demonstrated a variety of lightings by the Aristo lamp.

Again following the New York idea, several of the city studios were thrown open and demonstrations in lighting and posing given by prominent workers.

An effort is to be made to have the government modify the law of copyright in such a manner that the lettering announcing the fact of copyright shall be reduced to the smallest possible description so as to detract as little as possible from the pictorial qualities of a photograph. An effort will also be made to have the fee for registration reduced from one dollar to fifty cents.

The social side of the Convention was well cared for, one of the features being a trolley ride, dance, and supper given by the local manufacturers and dealers.

Toronto was again chosen for the 1908 meeting and the following officers were elected for the coming year: President, A. N. Cunningham, Hamilton; First Vice-President, J. Frank Jackson, Barrie; Second Vice-President, John Kennedy, Toronto; Third Vice-President, F. Roy, Peterborough; Secretary, E. Poole, St. Catharines, and C. L. Rosevear, Treasurer, Toronto.

PHOTOGRAPHERS' ASSOCIATION OF INDIANA.

WE have just received the report of the Indiana Association's Thirteenth Annual Convention, held at Winona Lake, July 8 to 12, inclusive. From the accounts we have of the large and enthusiastic attendance, and the amount of work that was put through, Indiana certainly had one of the best photographic conventions of the year.

The class-instruction method, under the supervision of Mr. W. S. Lively, was in force again this year, no less than eleven hours being devoted to this very practical convention feature.

The meetings were presided over by President Vilmer. The attendance was large and included a fair sprinkling of photographers from neighboring States. The Treasurer's report showed a balance in hand of $380.

In addition to the class instructions interesting addresses were given by Mr. G. Hanmer Croughton (will appear in a later issue), President-elect Frank Medlar (P. A. of A.), W. S. Lively, and Charles W. Neiswanger.

Altogether too much self-praise and glorification was indulged in in the matter of the Daguerre Memorial. With all due respect to the "fathers"

and trustees of this memorial, it has not yet achieved the distinction of being the greatest thing in photography and the repository of all the masterpieces. The practice of securing the complete ownership of the picture winning the "diamond medal" and retailing prints at ten dollars per print works an injustice on the maker of the negative and opens up a way to various kinds of graft. By Mr. Holloway's own showing the picture that carried off the diamond medal is worth at least $500. The cost of the medal was $150. What does the Daguerre Memorial do for the $350 profit?

The following officers were elected for the ensuing year: President, Chas. W. Neiswanger; First Vice-President, W. F. Schermerhorn; Second Vice-President, F. Benton; Secretary, J. Frank Cady, and Treasurer, J. O. Cammack.

The prizes were awarded as follows: diamond medal, E. E. Doty, Belding, Mich.; Doehm trophy, O. L. Harrington, Logansport, Ind.; gold medal, E. D. Beach, Buffalo, N. Y.; silver medal, Dudley Hoyt, New York, N. Y.; bronze medal, Thuss Bros., Nashville, Tenn. Pictures made by the following were selected for the salon: Towles' Studio, Washington, D. C.; W. Hirsch, Louisville, Ky.; Ethel Standiford, Louisville, Ky.; W. E. Vilmer, Crown Point, Ind.; G. G. Parrott, Fort Wayne, Ind.; C. W. Neiswanger, Muncie, Ind.; F. A. Reinhart, Omaha, Neb.; L. Flukenstein, Fairmount, Minn.; I. DeVos, Chicago, Ill.; N. F. Coner, Covington, Ky.; Baker Art Studio, Columbus, Ohio; J. A. Mock, Rochester, N. Y.; Proctor's Studio, Rochester, N. Y.; and W. S. Lively, McMinnville, Tenn.

Mr. Croughton, on behalf of the judges, explained why each award was made, placing each picture before the members and discussing its beauties and showing wherein some failed. This was one of the most satisfactory and instructive talks of the convention.

SYSTEM.

BY G. W. HARRIS,
Washington, D. C.

OUR best business men say that "the only way to learn to do a thing is to really do it." Everyone knows that if you are told, or shown, how to do a thing, it will not stamp itself on your memory; yet if you do it yourself it not only forces itself upon your brain, but it stays there, and it immediately forms a basis for further improvement, no matter how small a point it may be; for when we gain a good idea it grows and advances us in practical experience. The photographers, by their annual meetings and exchange of ideas, have raised our purpose and have made a plan of "give and take" of photographic knowledge that has helped every one of us. We know that no one can know it all, and that each of us can make a beneficial trade by giving his knowledge and experience for that of another; for while he gives the knowledge of one man, and that without the loss of anything to himself, he is handed back plans and thoughts of others. I never realized this as much as I did while attending the last New York convention, where a dozen photographers exchanged their best ideas to each other, and for the benefit of all, for a purse of $50.00.

I had been asked by our president to give a paper on any subject, and had

decided on "System in Plan of Business," and found that the president of the New York Society at that convention was giving a part of the idea I had intended giving here. It was so well received that it strengthened in me the belief that the idea was a good one; hence, I give the plan and system of our studio in Washington.

Of course, there are parts in this system which may not fit in your business, while others may see good in the part you reject. If I give some of you a good idea to think about, I am well repaid. I have made a sketch of the main features that I wish to call your attention to. I hope that they are large enough for each of you to see that you may thoroughly understand as I go along.

the photos are promised, and what disposition to make of the work when finished, and the date of delivery.

The best way for me to tell you my story is to take a customer in our studio. When Mr. Jno. Doe comes in for a sitting we do not try to sell him photographs, and let me explain right here that I find I must talk a little about business, which I will avoid as much as possible while explaining our system; but we show him sizes and styles until the reception lady finds out what he wants, then, taking him to her desk, she writes the Ledger Card in this manner: Mr. Jno. Doe, No. 8 John Street, New York City, 1,000," after which it is placed in a card cabinet case marked "Sittings," where it stays until the order is given. We also

Name DOE, Mr. JOHN 1,000

Address No. 8 John Street, New York

DATE		DEBIT	CREDIT	DATE
6-30,1907	12 Cab. Plat. Black	$12.00	$5.00 CASH	6-30
	July 10			

The ledger card (reduced in depth).

The features are, first, the Ledger Card, where you find the name, the address, the number, the order, the cash paid, the date, and when promised; second, the Sitting Slip, that tells the operator the sitter's name, the size wanted, the date, the number of plates exposed and how many are good; third, the proof that the original order is written on; fourth, the Proof Sack, that holds the proof and that gives the name, the address number, the order, the date

at this time make out this Sitting Slip, which goes to the operator; the name, the number, the size, the date and all necessary information goes on the slip, giving the whole cue to the operator without any further instructions of the reception lady. He then proceeds with the sitting, and when through marks the number of plates he used in each size. This slip is placed on one exposed plate, and when the holders are changed the number is placed on one plate.

M DOE, Mr. JOHN

No.	Cds.	Cabs.	P. P.	8-10	11-14	14-17
1,000						
Negatives Made						
Negatives Good						

Date

6—20—1907

Special

(The sitting slip.)

The Sitting Slip goes to the typewriter, who makes as many stickers as there are plates numbered on the slip. The stickers are all made on gummed paper and have the number and name on them. The next morning these stickers and plates go back to the operator and he cuts them apart and fastens one on each negative. The negatives are then counted and the total of good ones are marked on the Sitting Slips. The slips are then filed away by number for further reference. Of course, the proofs are made as usual, the negatives being filed away by the number, the proofs going to the customer. When the proofs are returned then is the time for the order, and after the order is taken we write it on the back of each proof, as given, using as many proofs as are accepted, making the charge on one proof and making the corrections on the face of the proof. This order and charge is then placed on the Ledger Card, which we have taken from the Sitting Box, and then the card is placed in the Order Box, where it is left until paid.

1000
12 Cab. Plats
Black
White Mounts
$12.00

Make 20 x 24
Proof Enlargement

June 30
July 10

(The back of the proof).

The proof is now placed in an envelope the face of which is like this: The number and order goes in the corner, the name and address in the middle and the date in the upper left-hand corner, the word left to read that tells what to do with it when the order is completed. This order-envelope, with the proof inside, then goes with the negative to the retoucher, who notices the proofs for correction and changes of hair, dress, etc., then to the printer, who need not ask any questions, for the whole instructions are on the proofs.

Date of order June 30	No. 1,000
Date promised July 10	12 Cab. Plat.
Amount of Order	Black
Amount Paid	
Amount Due	1 Neg.

Notify Name JOHN DOE

Mail No. 8 John Street

Express New York

When delivered

(Printing on proof sack.)

Then it goes to the finisher, who sees readily what mount they go on and how to trim. They are then sent to the reception lady for delivery. She looks up the card in the Order Box and places on the envelope the amount of order, cash paid and total due. Then she notifies the customer by postal card that all is ready, or delivering the work as per her customer's instructions if to be mailed or sent by express, as it is shown on the face of the Proof Sack. On the lower line of Proof Sack she notes when and to whom she delivers the work. The transaction closed, the Proof Sack is filed by number, and awaits a duplicate order, and the card is filed by letter, if account is paid in full, where it also rests until a duplicate comes in.

Now the points that I wish to call to your particular attention are, that this whole system is so arranged that nothing is forgotten, not even to the promised date, and that no questions need be asked by any one of the help, for each department has its own complete instructions. First, the Sitting Slip. We use this that the operator may know at all times who the sitter may be, that the number of the order is always before him for the marking of the plates. By the way, this serial number is placed on the Sitting Slip when the slips are printed for us. For the line it gives you on knowing how many plates the operator uses and how many failures he has, which is a good rule to follow, even if you do your own operating.

The Ledger Card. This is where you control your whole business, for in the card system you have, first, your Sitting Box, where you place all the cards that show you the sittings you have made, and as they stay in this box until photographs are ordered, you always know in at least a few minutes

who have not ordered, and if you use a good "follow up" system you can readily find out why your sitters do not order and by using a little time once each month, you can keep this box fairly clear, and you readily find out why your customers are not pleased with proofs. Next, the Order Box. You never place a card in this Order Box without first putting an order on it and you never leave a card in this box when it has been paid in full, for the paid cards go into boxes marked "Closed," etc. Hence you know that all the open accounts or all the money due you is in this box, and when the first of the month comes you are not running back through a ledger or register book, passing over numerous closed or paid accounts to find your money due you, but there they are, every card showing money, money, money. You cannot miss an account, nor is it too much trouble to write your bills when the first comes. It is all packed in a nutshell, so to speak, easy to handle and easy to control.

The reason of our not taking an order when the sitter comes in, unless, of course, it is an out-of-town customer, is that we found people continually changing their order when they saw the proofs; second, that we make the proofs the original order, and it is written on the back of each proof as the order is given. This system allows none to say: "I did not order this, etc." and, third, the printers and finishers can make no mistake, for each proof is marked plainly how many of each, what paper to use, the size and kind of mount, while on the face of the proof the retoucher looks for all changes that are to be made.

We use the envelope to hold the proof, for delivery instructions, when, how and to whom delivered, and for filing away by number, so that when the duplicates are desired, we get the proof for second order that no mistake is made in finishing from the wrong negative.

We make all proofs on 5 x 7 paper, therefore we use the regular 5½ x 7½ cheap manila envelope. We find that it is much more convenient than other sizes, for we use this same kind of envelope for accepted negatives.

Experience has taught us that the best card to use is the regular Yawman & Erbe stock 4 x 6 ledger card, as we find that is is sufficiently large to hold all orders, and yet not too big for easy handling. It also has the advantage of keeping both money columns together, and being a stock card, there is no extra printing expense.

I have tried to give you all the main points of our system, and I hope I have made it plain to all.

GEO. HARRIS,
Of Harris & Ewing, Washington, D. C.

Dry Mounting.—In the current number of the *Deutsche Photographen Zeitung*, Herr Hartmann suggests that thin tissue paper should be thoroughly saturated with the following mixture for this purpose:

Gum sandarac	10	parts.
Copal	3	"
Orange shellac	4	"
Resin	3	"
Venice turpentine	2	"
Alcohol	11	"
Spirits of turpentine	11	"

He advises the waxing of a sheet of glass, laying the tissue paper thereon, and then painting freely with the above mixture and allowing to dry and stripping. The paper thus treated is cut to size, laid between the print and mount, and ironed with a hot flat-iron. I am under the impression that the the use of this would be an infringement of the patent of the Adhesive Dry Mounting Company.

I have a faint idea that this is not new; but I cannot find any earlier mention of it.

WORK ROOM FORMULÆ.

Varnishes, Cements, Cleaning Mixtures, Inks, Polishes, etc.

Lamp Carbons for Photography.—A German inventor, it is reported, is making special arc lamp carbons by treating ordinary carbons with a solution containing from 0.5 to 1 per cent. of a mixture of equal parts of nitrate of yttrium and nitrate of lead. No change is apparent, while the amount of light remains the same. The character of the light is changed, however, and it becomes especially rich in violet rays with considerably increased actinic power. Both yttrium and lead give spectra very rich in green and blue rays, and in ordinary work ultra-violet is of very little account.

Shading the Lens.—In the current issue of *Knowledge*, Chapman Jones, F.I.C., F.C.S., discusses the advantages of shading the lens. He says: "Lens hoods, so far as they form a part of the mount, must be circular, or the field of the lens would be restricted, and therefore the optician's 'hood' can never be effective. What is really wanted is a diaphragm or frame, fixed on an extension in front of the lens, with a rectangular opening in it of exactly the same proportions as the plate. If different sizes of plates are to be used, the opening should be adjustable, and each edge should be in such a position that it is just outside the field of vision when the eye is brought to the extreme edge of the plate on the opposite side and one looks through the lens. Such an apparatus must apparently be cumbrous if adapted for a field camera of half-plate or larger size, but a hand-camera, in which the box projects beyond the lens, can easily be arranged so that the opening in the box forms the required diaphragm. I have for many years used a camera so constructed, but with the opening extended a little as necessary in two directions, to allow of the use of the rising front in its two directions. If the diaphragm with the necessary extension is too awkward for large cameras out of doors, a sky-shade or flap is the best substitute, as this keeps off the light from the upper, which is the brightest side. A sky-shade should extend well forward over the lens, and have a straight edge always parallel to the camera front, and be provided with a vertical adjustment. It should be lowered as much as possible without being at all visible when looking through the lens from the lowest edge of the focussing screen."

The Action of Green Light.—In a paper on the chemical actions of light, M. P. Villard describes in the *Journal de physique* (vi, May) certain continuation phenomena. An interesting experiment is illustrated showing the effect of green light on photographic papers containing tartaric acid. A sheet of such paper was underexposed under a stereoscopic negative; one part was then submitted to green and another to violet light. On the green part an excellent image developed, while the viole rays completely fogged the other part. The use of green glass in intensifying prints thus finds a ready explanation, says *Nature*. Obviously, much must depend on the spectral sensitiveness of the salts.

Cement for Leather.—Guttapercha in carbon disulphide, made syrupy. Use hot.

Sepia Platinum Prints.—The use of zinc oxalate for obtaining warm brown tones with ordinary black platinum paper was first suggested by Dr. R. Jacoby. He now states that rich warm sepia tones can be produced by using the following developer:

Potassium oxalate	200	parts.
Ammonium phosphate	50	"
Copper sulphate	2	"
Water	1000	"

The prints should be left for at least five minutes in this, otherwise they lose a lot in the fixing bath.

Waterproofing Wood.—Asphalt, 4 oz.: pure rubber, 30 gr.; mineral naphtha, 10 oz. Apply three coats with a stiff brush, drying after each.

Varnish for Wood.—Useful for inside of wet plate slides, etc. Sandarac, 4 oz.; methylated spirit, 12 oz. Dissolve and add 200 grains *Venice* turpentine.

Varnish for Brass.—Celluloid, 7 gr.; amyl alcohol, ½ oz.; acetone, ½ oz. Used cold.—*From Figures, Facts and Formulæ, Tennant and Ward, New York, Publishers.*

TRADE NOTES.

ANDREW J. LLOYD & CO., of Boston, have just issued the 1907 edition of their well-known photographic encyclopedia. It is a very full and complete list of photographic material and should be on hand for ready reference. Copies can be had by writing to the publishers at 315 Boylston St., Boston, Mass.

THE SPRAYER AIR-BRUSH.—Liberty Walkup, of Rockford, Ill., inventor of the air-brush, has just issued a little book on the applications and care of the sprayer air-brush that should be read by all users of the brush. Mr. Walkup has also patented and put on to the market a novel delineator for measuring and enlarging pictures. It retails at $3.00 and is fully guaranteed.

TABLOID CHEMICALS.—Burroughs Wellcome and Co., of 45 Lafayette St., New York, manufacturers of this brand of photographic chemicals, have just prepared some trial sets of their specialties, retailing at fifteen and thirty-five cents per set, each set containing enough *tabloids* for a practical trial.

COLOR VALUES OF THE ANSCO FILM.—From the Anthony & Scovill Co. we have received a circular illustrating, by reproduction of tests made with the Chapman-Jones plate-tester, the advantages of harmonious color values of the well-known Ansco Film. In portrait work, the draperies, dresses etc., are reproduced in their true color values, auburn hair being reproduced in a different tone from black. Full particulars of the Ansco film and its color sensitiveness will be found in the Ansco catalogue, which can be had from The Anthony & Scovill Co., Binghamton, N. Y.

GEO. MURPHY, INC., of New York, advise us that they are sales-agents for both the *American Annual of Photography* and the *British Journal Almanac.* The former will retail at 75 cents in paper and $1.25 in cloth binding; the *Almanac* will be 50 cents in paper and $1.00 in cloth binding. It is not too early to place your order now; last year's editions of these popular annuals were sold out at an early date.

A CO-OPERATIVE DRY PLATE FACTORY.—The United Photo Materials Company, of Lewiston, has been formed for the purpose of manufacturing dry plates and chemicals and supplying same direct to the user. To get the consumer directly interested in the goods he is using, the stock of the Company can be bought in small blocks not exceeding four twenty-five dollar shares, in this way participating in the profits; he gets his plates and chemicals at cost price.

The plates will be made under the supervision of Mr. C. O. Lovell, which is sufficient guarantee of their quality. It is an experiment that will be watched with interest. Full particulars can be had by writing the Company at Lewiston, Me., or 48 Summer St., Boston, Mass.

THE MIRMONT PHOTO PAPER COMPANY'S New York store, on Twenty-third Street, is doing much to popularize the New York papers, the good qualities of which have only to be known to be appreciated. We recently made a big batch of prints on their platinum paper, black and sepia, securing uniformly good results. We have no hesitation in recommending these papers to our readers.

ANOTHER NEW YORK ARISTO SCHOOL.—Owing to the great success of the first New York Aristo School, held under the auspices of Messers Geo. Murphy, Inc., in April last, they have decided to hold another school on September 10, 11, and 12. The entire second floor of the Murphy building will be devoted to the school. Day and evening classes will be held, covering all branches of practical photography under the skylight, printing, and enlarging. A detailed program can be had by addressing Geo. Murphy, Inc., 57 East Ninth St., New York.

EDITOR'S TABLE.

JUDGING by the number of new and magnificient studios that are being opened and planned, photography is certainly enjoying a very big measure of prosperity.

Pirie MacDonald has opened a very handsomely fitted up studio on Fifth Avenue at Forty-seventh Street—this in addition to his down-town studio. Mr. MacDonald will divide his attention between the two studios, catering to men only; by appointment.

S. H. Lifshey, after spending ten years in one of the less fashionable sections of Brooklyn, building up a reputation for the highest class of portraiture, has moved into a well-equipped studio in the best residential section of the city, the section from which he has been steadily drawing an increasing clientage.

Elias Goldensky is planning a wonderful studio in Philadelphia of which more later. It will have many unique features and few equals in the country.

Judging from the illustrations and description we have of the new Townsend Studio at Des Moines, Iowa, we can quite believe that it is one of the best studios to be found in the West and quite equal to anything we have in the East. It has the additional advantage of spaciousness, not always obtainable in the larger and more crowded cities.

Gustave Lorey, of Albany, N. Y., has just purchased the Albany Historical and Art Society. After extensive alterations the building will be opened as a first-class and thoroughly well-equipped portrait studio. During the past three years Mr. Lorey has had unusual success with the work from Wellesley, Vassar, and Smith Colleges situated in his vicinity.

The few new studios mentioned are indications that there is not much to complain about in the present condition of professional photography.

MR. WILFRED A. FRENCH, owner, editor, and publisher of the *Photo Era*, wishes us to say that the statement, which appeared in one of our contemporaries, to the effect that the *Photo Era* has been sold, is entirely without foundation. The magazine remains in the hands of Mr. French as described above.

MR. F. POHLE, of Buffalo, N. Y., has invented a mechanical device for holding babies in a desired position while having their photographs taken. The apparatus is invisible when in position and helps to secure an easy and natural pose—a somewhat difficult matter with the average baby and the average photographer.

MR. J. N. LAPRES, of Montreal, and President of the Canadian Photographers' Association, is lecturing on and demonstrating the new Lumiére color process and has arranged with Lumiére Bros. to introduce the new process into Canada.

PHOTOGRAPHERS' picnics are the order of the day, the Montreal photographers picnicing on September 21, and the photographers of Milwaukee on the 27. The photographer is beginning to realise that his rival is not necessarily a cut-throat and everything else that is bad; he is invariably a decent sort of a fellow and well worth knowing, as the numerous picnics and convivial and social gatherings testify.

WE congratulate Jos. De Nunzio on the magnificient showing the De Nunzio Angelo Platinum paper made at the Dayton Convention. To have twelve out of the twenty-five salon pictures made on one paper; it is certainly the strongest kind of endorsement. Such a proof of superiority is away ahead of any hypo- and ferricyanide tests.

"CHRISTMAS RUSH" is too often just another name for bad management. It is one of those things that the wide-awake photographer can anticipate and make arrangements for. The advice given by The Sprague & Hathaway Company on the opposite page is timely and should be taken to heart by every photographer. Good work is very rarely done at high pressure, and your customers will appreciate the fact that you are seeking their Christmas orders now so that they may receive the care and attention necessary for the best results. Talk to your customers along these lines and in most cases you will secure their orders, then loose no time in getting them into the hands of the finisher and enlarger. The Sprague & Hathaway Company will execute your order now and hold it for delivery as late in the season as you may desire. The general excellence of the work put out by this firm is too well known to need our endorsement at this date, but we do urge photographers to impress upon their customers that right now is the time to think about their Christmas wants. Do not loose good orders by waiting too long before seeking them.

"Portrait of Miss T.," by Garo, Boston, Mass.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

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THE LUMIERE AUTOCHROME COLOR PROCESS.

In our August issue we gave a full description of the new Lumière autochrome color process which had just been demonstrated in Paris by the Lumière Brothers, and which is now creating somewhat of a sensation in the photographic world.

Since then several batches of the plates have found their way to England and several of our English contemporaries have secured results which enable us to form a more definite idea of the results. The enormous demand for the plates in Europe and the limited means for their production have so far prevented a supply being shipped to this country.

"Color photography" has been "discovered" at more or less regular intervals ever since photography was invented, until latterly it has been used by the Sunday papers to alternate with the sea-serpent as a space filler in the dull season.

It seems, however, that the thing that all photographers from Daguerre down have dreamed about has at last come to pass—the reproduction of an object in its natural colors as seen by the eye, by a single exposure with an ordinary camera.

True, the resulting photograph is a positive transparency on glass that must be viewed by transmitted light, but it is nevertheless an absolute rendering of the subject in its true colors as we see them, made on a single plate with one exposure.

This is a very decided advance on the three-color method of three negatives superimposed to produce an approximate result, effecting a considerable saving of time and expense, while giving infinitely better results. It is the greatest discovery in photography since Daguerre made his first daguerreotype. It is to photography what the discovery of perpetual motion would be to mechanics.

It will revolutionize color printing and will bring within the reach of all, not only exact reproductions of the great paintings, but also reproduce the warmth and color of the canyons of Arizona and the opalescent beauty of the Bay of Naples.

A supply of the plates is expected in New York within the next few weeks; meanwhile we give below a description of the results obtained with the first autochrome plates exposed in Scotland.

THE FIRST DIRECT COLOR PHOTOGRAPHY: LUMIERE PROCESS, IN SCOTLAND.

BY E. L. BROWN.

EDINBURGH, September 2, 1907.

EDITOR WILSON'S PHOTO. MAGAZINE.

Dear Sir: I have just seen a series of *direct* color pictures taken on Lumière's new autochrome plates by Mr. E. L. Brown, a clever amateur here, which have astonished me in no small degree. Hitherto color photography has not progressed much beyond the infantile stage—difficult, indirect, complicated, and practically only the promise of something to come; but the plates I refer to are clear and vigorous in the colors—so much so that at first sight one may easily fancy they had been assisted by hand, but that is not so. They are absolutely untouched, and are startlingly true to nature in the various tints of fruits and flowers of the subjects.

No color submitted by Mr. Brown has been refused by the new plate, everything being charmingly rendered with the truthfulness of nature itself. The fine bloom on purple plums and the transparency of red currants, for example, along with the brown fur of a stuffed squirrel, all give the true feeling on these astonishing films.

For the time being, this marvellous advance is confined to the plate, except for admirable screen exhibition by the optical lantern; but having made this great gain, it is not difficult to conceive of a picture on specially prepared paper or other material being achieved in the near future. Indeed, it seems that is being already attempted.

I persuaded Mr. Brown to write a short paper for your magazine, which he consented to do and which I have great pleasure in enclosing.

I am yours, etc.,

G. G. MITCHELL.

Having been asked to repeat my experience on the above subject I gladly do so, in the hope that it may be of some use, and that it may act as an incentive to some of your large army of readers.

I was greatly impressed with an article in *Photography* on the above subject. It was given first place. The author, Mr. R. Child Bayley, editor of the paper, enthused greatly over the new autochrome plate and the results obtained by it, and displayed an abandon in his eulogy that was refreshing.

The subject seemed to hold a special fascination for me; probably I was infected with the Bayley enthusiasm. Be that as it may, I wrote to a friend in France and asked him to secure me a dozen of these wonderful plates. After some delay he was successful, and my first consignment arrived.

The compounding of the various solutions takes time and care, and I might point out here that any carelessness is fatal to success; no rule-of-thumb work should be done in this matter at all. Everything must be done with accuracy and precision.

The plates received, I soon made a carrier (French size) and set to work with sweet peas of various colors as subjects.

A certain amount of guesswork was necessary as to exposure, as no idea of the speed of the plate could be obtained —at least, I got none.

On Monday, August 12, I made my first exposure, allowing twenty minutes at F. 8 indoors, as it was a very dull afternoon. All went well until I came to the fixing and washing, before which, to my great delight, the various shades

of color were all that could be desired. This process over, I did not like my picture so well. The mischief began in the fixing, frilling showing at this stage, while the washing did not improve it. On holding it up to dry, the film ran in all directions, all the color in the film having apparently disappeared. This shows that great care must be taken.

My next exposure was on Thursday at 6.15 P.M. I developed on Friday morning, and was rewarded with success. On the same morning I tried an indoor subject, but, being much under-exposed, I got no result (using stop F. 8 one minute). I then arranged a group of geraniums, and was rewarded with success after an exposure of eight minutes. To a study of roses I allowed ten minutes, and, to my great delight, was again successful. All the colors were beautifully rendered, and, on comparing them with the flowers, I did not perceive any false coloring. I now turned my attention to fruit, etc. Here I also met with success. I had bananas, apples, pears, plums; red, white, and black currants; red and green gooseberries, strawberries on a creamy tinted cloth, and a vase of various colors, including a deep blue, all against a background of blue-gray. Surely this was a thorough test of color. Here, too, the colors were perfect, and in another group of the same I had all the background and the table laid with a primrose shade of silk. The only fault here was that the background was so near the shade of a rose that it spoiled the true color effect. I may point out that, *if the coloring is not pleasing to the eye, the fault lies with the photographer and not in the plates*, as in this case I over-exposed, and did not get such a natural feeling of the bloom of the plums as I got in the previous one. Over-exposure is not to be recommended; under-exposure, though giving a denser color, is, to my mind, more truthful. Further exposures I made on grapes, lemons, birds' eggs, ornaments, etc., which were all successfully rendered. I also made an attempt at portraiture and, though requiring a long exposure, it was simply amazing to see the various colors coming out so true; even the colors of the complexion in a well-exposed plate are marvellous.

I find on viewing my various results (twelve in all) that the most suitable background is gray or blue-gray. I have not attempted anything in the way of controlling developments, but others may, in due course, give their experiences.

I need not go into details of development, etc. (further than that there are nine separate baths), for anyone wishing to go into this color photography will receive, with the plates, full directions.

The screen is specially prepared (by Messers. A. Lumière & Co.), costing, in my case, 4 francs for $4\frac{1}{2}$ x $4\frac{1}{2}$ cm., which is quite large enough for a $\frac{1}{2}$ plate lens. I may say I never realized what enthusiasm in photography meant until I tried this, the latest invention, and I was known before among my friends as an enthusiastic photographer. Indeed, I only slept sparingly that night through sheer excitement over my success.

I trust that these random details may be of interest and use to those about to try these plates.

Varnish for Prints on Wood.—(*a*) Canada balsam and turpentine, equal parts, melted together in a warm place. Apply two coats with stiff brush. (*b*) Size the prints with a coating of thin gelatine solution, allow to dry, and then apply artists' copal varnish. This dries glossy and has a hard surface less liable to injury than Canada balsam.

THE PHOTOGRAPHERS' ASSOCIATION OF NEW ENGLAND.

Tenth Annual Convention, Boston, August 27 to 29.

The Tenth Annual Convention of the Photographers' Association was held in Boston, August 27, 28, and 29, and as present-day conventions go it can be written down as a success. The attendance was large, over five hundred photographers putting in an appearance at one time or another. Although the opening speech by the Speaker of the House of Representatives was listened to by less than fifty people, the later meetings were marked by much animation and enthusiasm.

President Evanoff, ably assisted by First Vice-President Ames, Secretary George Hastings, and Treasurer Holman, carried the convention through to a successful finish in that smooth and easy manner that we have become accustomed to look for in a New England convention.

The picture display, an unusually large one, something over fifteen hundred prints being displayed, was quite up to the average. A splendid display of German and English work created considerable interest, especially the German work, which was remarkable for its strength and beauty.

The entertainment committee did its work well and made the social side of the Convention a most enjoyable one, the entertainment and dance given on the Tuesday evening deserving special mention.

The Association did well in electing Will Armstrong, of Boston, for its next president. He is fearless and independent, and will not hesitate to introduce innovations if he decides they are necessary. H. E. Bosworth, of Springfield, Mass., was elected First Vice-President. Secretary Hastings and Treasurer Holman were reëlected. The sectional Vice-Presidents elected were—for Maine: Frank F. Adams, Portland; for New Hampshire: C. H. Lindsey, Manchester; for Vermont: C. Bau, Barre; for Connecticut: H. J. Seely, Bridgeport; for Rhode Island: Carl V. Pohlson, Pawtucket; for the Maritime Provinces, G. A. Gauvin, Halifax.

The prizes were awarded as follows:

Grand Portrait Class, gold medal, E. C. Doty, Belding, Mich.

Portrait Class. Frist prize, Gay Studio, Fall River, Mass. Second prize, W. B. Davidson, Narragansett Pier, R. I. Third prize, J. P. Haley, Bridgeport, Ct.

Landscape Class. First prize, C. L. Powers, Claremont, N. H. Second prize, G. E. Tingley, Mystic, Conn.

Aristo Trophy Class. First prize, Marceau, Boston, Mass. Second prize, J. H. Garo, Boston, Mass. Third prize, J. Thieboldt, Fall River, Mass. Fourth prize, Conly Studio, Boston, Mass. Fifth prize, Byrd Studio, Cambridge, Mass. Sixth prize, C. J. Poisson, Bedford, Me. Seventh prize, W. C. Noetzel, Newtown Centre, Mass. Eighth prize, A. Kazaryian, Boston, Mass. Ninth prize, Thuod Bros., Fall River, Mass. Tenth prize, W. H. Caldwell, Brockton, Mass.

The Aristo awards were made by popular vote, the names of the contestants being withheld.

The Angelo Trophy, a handsome silver placque by Tiffany, of New York, was awarded to Morris Burke Parkinson, of Boston, for the best print on Angelo platinum paper in the exhibition.

The C. P. Goerz Silver Trophy was awarded to J. H. Garo, of Boston, and being the third successive time this handsome cup becomes the property of Mr. Garo.

AN ADDRESS DELIVERED AT THE NEW ENGLAND CONVENTION, BY CHARLES WESLEY HEARN.

SOME one has said, "Man, know thyself." This personal analysis of our own mentality, if at all possible of being handled by ourselves, is one of the greatest things that we can do for our development. Understanding ourselves will enable us to shape our affairs so that we can do things with more profit to ourselves. I may perhaps be pardoned if I briefly dwell on a personal matter which will illustrate this fact. A few years ago I started to do this same thing. I found, in carrying this out, that I ran against many stumbling blocks that went contrary, not to my inclinations, but to what I should do. After thoroughly considering the fact I concluded that the only way that I could do was to temporarily give in, as they were not at all bad, partly a matter of personal ambition. I did this, gentlemen, from no unworthy object of self-advancement or praise, but purely as a means of clearing the path to what I hoped might be better for the future, and because I thought I could also do good.

Those of you who are aware of my career for the last few years will probably understand what I have reference to. Now the barriers are taken away, and I *am more pleased* at the fact that I have been able to show *continuity of purpose for a few years past* than I am of anything that I have accomplished. It gives me some hopes of myself, because I can persistently carry out an idea for a few years. If you will review —as probably some of you are doing at the present time, to some extent—your own mental get-up, analyzing yourself, and learning to understand yourself, your weaknesses, where you are weak, and try to improve upon them for your ultimate success, whatever it may be and in whatever line, then you will accomplish much. If persuaded that you are particularly gifted in some things, your wife will very likely let you know whether you are or not. It needs a saint, you know, sometimes to take with a good grace the sensible things our wives tell us we ought to do. But whatever you do in that line, have it with an object in view for your own advancement. This is a peculiar kind of a practical thing to talk on, but if you thoroughly analyze it it is a great deal better than a great many other things that I might say.

We are often asked why we do not do this thing, or that thing, or the other. We often do try to do this thing, that thing, or the other. Self-analysis will tell us *whether we are capable* of doing that or not. We may possibly think we should make or build up a tremendous business on certain lines. Self-analysis will tell us whether we are able to do that, whether you have the *ability* to carry it out to a successful result. Another thing is this: if your own mentality is such that you are not in harmony with a certain idea, a certain scheme, if you will excuse the word, why try it? To go along the path of least resistance, *if your judgment tells you that it is your life work, and that you are in harmony with that idea that it is not an ignoble one*, why not carry it out? I trust you will think more of this subsubject.

Last year, at Niagara, Mr. Puffer, one of the speakers I engaged, talked on "Intuition," which is more or less akin to what I have been speaking about, only this had reference to the handling of your trade. One of many things

which he said, and which will bear repeating at this time, was: "It is far better to know intuitively when a customer comes in to us what we should say and when to say it than a great many things that we might otherwise do. To say the right thing at the right time." He has made a study of it, with considerable success, I understand.

I will close that part of my remarks by stating something that was brought to my attention at Dayton week before last. One of the most prominent photographers at that convention, who stands high in the estimation of his competitors and who does a large business, said to me, in speaking of a certain business venture: "I have given it up. It was a mistake. I am troubled with too much ambition, and I know it." This, you see, is citing a case of a man who understood himself, and although he had made a slight slip-up, of not much consequence, it showed he understood himself and was holding a control and a curb over his course.

At that convention Mr. Robert Lieber, a prominent Indianapolis stock dealer, gave a brief talk to us on a stock dealer's views of how the photographic business should be conducted. He rather surprised us by not speaking of the things we expected he would speak of, giving us certain raps, etc., but he did talk on certain unexpected lines, and in that sense similar to what I have been talking to you. That was a more practical talk, such as you are accustomed to hear, and I advise you to look it up.

Now, there is another thing that I will talk about for a few minutes that is somewhat more practical. It is about pictures.

We have in the other room a large collection of fine pictures, and technically as regards negatives, cleanness of prints, and chemical effect and all that, the prints all stand very high. I will only speak, however, of the Aristo Trophy Class. I speak of this because I am not in the competition, and I can speak because I do not know the maker of a single picture, having taken particular pains not to.

How is it that there are some pictures there that are much better than others? They are all practically faultless in all respects, to all intents and purposes, as regards chemical defects, but what is the difference? It is simply the observation of certain things which are very important to be observed in picture making, and that is that in some of the pictures there is a lack of the ugliness of the silhouette. There are in some of the pictures good tone values. In some of the pictures, which are not so pleasing, there are warring elements or points of interest demanding attention, and then there are also improper massing of the lights and darks. Now, the New England photographers, ever since we started our first convention, have been possessed of high ideals. We have built up for ourselves here a reputation as an association with these ideas. This is not an untruth; it is a fact. I have been out among other associations in various parts of the country and have found that out. The fact of our not appreciating and bringing into our pictures a very few of the more important things which go so far toward making pictorial work is the thing that we should not overlook. Now, to be more plain, it is this:

When I get started in on this strain very many of my good friends, who like a good straight photograph, are apt to criticise me and jump to the other extreme and state that I am possessed with the idea of very low tone black things, because the few pictures I make for exhibition purposes have been, in their opinion, more or less on those lines. Why not be sane in making straight photographs as well as being sane, as they call it, in making pictorial

work? Pictures that stand out as bold, bizarre, so loud that they yell at you in their attractiveness, and *absolutely devoid of all color tone values, is not sane; it is insane.* You do not have to go to work and make "black, muddy pictures" to make nice straight photographs that will please the eye. What if we do make pictures by sunlight? Why not use that sunlight cautiously and sparingly, and not throw open our skylights wide to the sun? This will take care of our silhouettes, tone down our lines, and make less contrast between the lights and darks, and make the backgrounds less marked. Your work will improve. I think almost every one here is practising these things I am talking about, yet I do it for the few who are not, and ask them to look at the pictures in the adjoining rooms. The most beautiful things are where the silhouettes have been taken care of with some judgment, instead of having a black mass here and a white mass there. The best thing I know of to help this is Professor Beck's book. I am not paid a commission to recommend Professor Beck's book, but it is the book which has been in process of publication for several years. It is now published, and it not only tells you of the faults, but it tells you how to overcome them on the negative.

OUR CONVENTIONS.

Now, as to my views on conventions. On certain matters I will speak to you about a few minutes later. Personally, I think that the general scheme or principle upon which our conventions are conducted, and which appeals to you—brings you here to them—is largely the correct one. The great masses of photographers desire different things, and there is no way we can get that instruction except at conventions. The pictures that are exhibited on the walls give the instruction and is primarily the principal object, so it is understood. The talks especially prepared for you should be supported by your attendance to encourage the speakers to talk to you again. The exhibition of these wares by the manufacturers and dealers is a matter of personal interest to many of us. These we can acquire at conventions, but generally there are other things (and in this I take issue with my friend, Mr. Goldensky) which are most valuable to the masses, such as the paper and plate demonstrations. Therefore, the principles which underlie a popular convention for the masses are on similar lines to the present one and other similar conventions, *but you can overdo that as well*, for you can have for the time being an ignoble thought prevailing; we may have a current or wave strike us for the time being. It is likely to strike a convention; it is likely to strike a lot of conventions, but out of these things eventually great good comes, things for our mutual improvement and benefit.

This is the tenth convention that we have had, and this makes the tenth board that you have elected. They have all served you conscientiously and to the best of their ability. This convention is fully equal to its predecessors, and in some respects it is superior. The work of your officers has been appreciated. I do not know whether it is a matter of general knowledge or not, but I have great pleasure in stating that our honored president is now a national association officer, unanimously elected on account of his ability to an office which he did not seek and which he will fill with great credit. The New England Association, as well as Mr. Evanhoff, is to be congratulated upon his success, and the National Association is to be no less congratulated upon securing his services and his work.

Now this leads me to another thing in the conduct of this Association. Here-

after you need one thing. I am not pessimistic by nature, in fact, inclined to be otherwise, but I think we need at the present time a strong board, more so, even if possible, than we have had in the past. You do not want it a top-heavy board or a bottom-heavy board. You do not want it to be swung entirely by the head, without the help of the others, nor do you want the tail end to swing the head, but you want a well-balanced board. I see I have been put on the Nominating Committee, although not the chairman, but I think I can express his sentiments when I say to you he would like to have suggestions from our members as to the strongest men and best men they could recommend for the various offices.

This leads me to the third part, and I shall be very brief on that. That part of my discourse I had planned out prior to asking the advice of several of my friends what to talk about.

The National Academy of Photography.

While I am reconciled to the present method in a measure, mind you, witb improvements for our conventions, I do not say to swallow the whole thing that is given us, thinking it is all right and nothing at the present time wants to be changed. Still, I can be reconciled to commercialism simply because of one idea, and that is that out of our hearts, while we are pursuing the nimble and frisky dollar, more nimble than we wish, there are moments in all our lives when, having high aspirations, and possessed of an ideality, we desire to see if we cannot do something better for the world on account of our having been in it. We do not desire to take and absorb, like a leech, the blood of everything that there is in photography to our own personal aggrandisement, financial and otherwise, and not give something in return for the same. We want at all times to have down in the bottom of our hearts that one prominent idea that we are going to do something for photography, because photography is daily doing something for us.

By the discovery of this art many of us are advancing. We have, to a large extent, the respect of our friends and our acquaintances, the advantages of our social position, whatever it may be, simply on account and because photography has done something for us. Now let us do something for the art. While we are reconciled to this convention idea, let us not forget that there is something that we can do to elevate the art of photography, to dignify her, to elevate her, to put her in her proper sphere amongst the arts, for, although the youngest, she is the most illustrious of them all. Thoroughly imbued with this idea, I have, for the past two or three years, tried to bring others to my way of thinking. There are many obstacles to overcome in the establishment of an academy of photography. The subject, the more I go into it, becomes more and more impressive on account of its vastness, but, generally speaking, the time is fast approaching when that noble spirit which possesses at times even the meanest man on earth will pro rata assert itself. When it is possessed by the photographer, whose daily life deals in beauty and all the things that appeal to the esthetic nature, it brings forth the desire stronger and stronger in his heart that he will have an ideal and pursue it, and that man is in heart in favor of the academy devoted to ideals, entirely absent from commercialism. Our approved and present-day methods of conducting conventions is fast creating this need; in fact, is fast driving us to it. It needs but a little thought to see that it is coming, and that in two or three years at the most, *even if as long as that*, the academy will be born.

This academy was authorized by the

National Convention last year, of which I had the honor to be its president. I appointed a large committee, which could not meet at Dayton, so another committee was appointed, consisting of myself as chairman, Mr. J. M. Appleton, of Dayton, a former president, and Mr. G. W. Harris, of Washington, D. C., appointed with power to bring results, as far as possible, toward this end, and to report at the next convention.

We have before us a master, who is our educator, in Professor Beck. I have brought him to the extent practically of making him one of us in spirit, if not otherwise, and he probably will be allied eventually to the advance movement which we are contemplating. There is one thing I want to say before I forget it, though. This is not a matter of C. W. Hearn, personally; *I want that distinctly understood.* This is a matter that is endorsed and backed up by the National Association of Photographers, is vouched for by others, by members of different societies and associations throughout the country, and my own connection with the matter is for no other reason than because I happened to bring it up last year at Niagara. The present handling of this thing by myself *is not* a matter of personal wish on my part, but you know, as well as I do, that if you do not have some one handling a thing who is interested in it—if it is in the hands of a lukewarm person—it dies a natural death; yet I am willing to handle it in order to give it support until it is taken out of my hands by men more able, which I will be very heartily glad to have done *at any time and at any moment.*

I want to read to you what Professor Beck says about it and then I am done:

"There are two meanings established attached to the word academy. First, a school for instruction for youth; and, second, it designates a society of learned men for the improvement of science or the arts. For instance, the French Academy of Fine Arts consists of forty members, ten honorary and ten foreign. It meets once a week and publishes important sessions and other works, and distributes prizes. The whole institution has one regular session in common on the 2d of May of each year. In Great Britain the word academy is reserved for institutions connected with the fine arts. In America there was an academy of the arts and sciences in 1780, 1800, 1807, 1828 and 1863, conventions being held in various cities."

Whatever form the academy of photography may assume, it is evident that one of its prominent aims must be the advancement of art education in photography.

Our recent convention at Dayton exposed the situation. The pictorials showed by their superior quality of work, when compared with "good straight photography," that the latter is wanting in the essential portrait qualities. The photographers were more serious than I have ever known them to be at any convention, which I attribute to this discovery. If an academy of photography was to be established on the principles of the Academy of Fine Arts in Paris its educational features would not help much the 30,000 professional photographers of our country, who are in want of an art education. But when an academy is formed that undertakes to lift that body of men out of its present condition, giving it every opportunity for education along pictorial lines, success and long life to that institution are assured. However, we are facing a great disadvantage in that the photographers' associations have no permanent board to carry on work requiring steady development, which is necessary to educational work. We change our officers each year, and there is no one in long enough to carry on any progressive

work. Under these conditions there is only one thing that associations aiming at an academy can do, and that is to ally themselves with some great school of education where educational work is kept running by endowments. Recently there was effected a union of certain art societies and the National Academy of Design with Columbia University. Why cannot the photographers do the same thing with some of the large colleges in the country? I should say that the first result of such a step would be the gaining in prestige and standing, and, second, that the art of photography would be taken seriously in all countries, and, third, that extension work would reach all men, and, fourth, it would be a school convention centre for those desiring pictorial instruction. You would be then free from commercial domination, from individual aggression, from inefficiencies of all kinds, and the whole work would be as helpful as any work in the universities.

This, in brief, is a possible plan that is being formulated by those who are to report at the next convention of the national association. It may be a year or two, or three years, but the general trend of our conventions is such that we will sooner or later have to have an academy for the advancement of our profession.

"RUST SPOTS."

AN ADDRESS DELIVERED AT THE NEW ENGLAND CONVENTION,
BY MR. H. A. COLLINGS.

We find in all conventions, no matter under what branch of industry they may come, that the man who can give the most flattery and praise to his fellows is the most popular. Too often conventions have not performed their mission because no one has had the unpleasant task of criticising. Yet we will all agree that through criticism much more has been accomplished than through praise. The subject I have chosen does not sound like praise, so it must be the other.

I have selected the subject "Rust Spots" for my remarks, as I have personally noticed that this is the cause of more failures or lack of success than any other one thing. Do not infer that this disease, as we may term it, is attributed alone to laziness, as this is not the case. I take it for granted that you are not lazy; if you are, you are beyond redemption.

When our attention is called to these words we first think of some machinery or metal, and upon investigation we find that it is not only machinery which is idle, but also that which is in active use and has not had the proper attention that bears these marks of decay. Through the lack of proper care a great percentage of the machinery now in operation is being pushed into premature decay and much of its energy lost. The same is true in business life, not only in photography but in all branches of business. The lack of knowledge of the wants of your customers, the efforts too many are putting forth to lighten their labors and place themselves first and their trade second, the living too much within ourselves in a channel that grows narrower every day, and in many ways we are putting "rust spots" on ourselves of the most poisonous kind, and they are the hardest spots to find.

We say that the world is advancing. I hear that expression every day, and I have actually come to the conclusion that there must be some truth in the statement. The advancement made in other lines is only a barrier to us unless we advance in our lines. And if we do not advance, and others do, we are going backward, as there is no such thing as standing still. I once met a contented photographer who had won national honors, and he told me that his time for study had passed; he was going to wait for others to catch up, and that is the last I ever heard of him. The others were not slow in catching up, and passed him in his sleep. He is now forgotten in the world.

When I ran a studio I used to get rusty and tired, and I would close up my place. Many of you have heard of one sign in my case which read: "It's too hot to make good work, and I'll be damned if I'll make poor. I've gone on a vacation." When I came back they were waiting for me, and all asked how I enjoyed myself. But, I was never half as rusty as my accessories were. I once got a dandy posing chair for children. It was a willow settee. After I had used it for a time I concluded to put up a set of children's pictures for a show. I made some sixty or eighty and put them on a frame about five by seven feet. Through the kindness of a merchant I put them in his window with a sign, "Collings absorbs the tears." I stood back on the curb and looked at them, and all I could see was willow chairs. I had them in all the pictures, and I had the frame back in the studio in less than twenty minutes. We say that there is an individuality in our work, but look well, friends, that the individuality is not an old chair or background with a window on one side and a drapery on the other.

If you will bear with me a moment I will touch on a delicate subject, because I feel it my duty to do so, and that is the "rust spot" of conceit. Battling Nelson, in his article supposed to have been written by him, and published in a New York paper, said "that while in school he learned to compare the words good, better, best, and that when one got to the best in this world of advancement that if he did not keep up his training and work hard to improve he would soon read for good, better, best, not so good, worse, bum."

It was but the other day that John L. Sullivan said "that the way to avoid 'knockout' blows was to keep everlastingly moving." But you say it is tiresome and monotonous; one must rest sometimes. Systematize your resting as you do your work, and take your vacations, but do not take them in the studio, and when picture making gets to be a burden do not make pictures, but organize a system of rest in a place where you can get rest, and let the public know you are resting; and when you get back to work let the public know you are working, and you will not lose anything.

Bouquets are liable to do more harm than good in all lines of business. The accepting of an office, the winning of a prize, the flattery handed you perhaps by one who knows nothing of photography, has caused more than one to fall. I mention convention honors and the winning of a prize as liable to cause "rust spots." I will attempt to paint word pictures of the methods too often used in making convention work. We look over our year's work in the hope of finding a picture to exhibit, and the more we look the more discouraged we get. Of the 1500 negatives we have made in the last year there is not one that we want to show. So we start to make an annual picture that we are not ashamed to show. After repeated efforts of several subjects, taking our time and oftentimes neglecting our regular busi-

ness, we make a picture and get it to the express office fifteen minutes before the last express will get it to the convention on the opening day, and we win a prize on it. We deserve credit for this. I do not want to discourage you in the work, but this point I want to bring out: that that trophy does not improve the quality of those 1500 pictures that you have sent out in the past year. And the fact of winning a prize does not make that patron think that that one dozen pictures we had hard work to talk on him six months ago are any better today than they were then. My motto is to make every picture a prize, eradicate the "rust spots" of indifference and unconcern, and throw yourself with that same earnestness you exhibited in making your prize picture on all of your work, and when another year rolls around you will have more good stuff to send them than you have frames and space to show them in. But you say, "How about the costumes?" Frank Medlar, the new president of the National, has a showcase full of medals, and his work was made in a studio way up in the northwest corner of Iowa. His subjects were farmers and their families, and you can get detail in whiskers right here in New England just as well as you can in Iowa. But do not all go home looking for whiskers; that extreme has gone by. Ten years ago, at Celeron, Professor Grffith publicly admired a picture of an old man with whiskers, and the next year everybody had a picture of whiskers and whiskers were at a premium. Then came the Madonna head, and all had one or more of those. Then came the extreme in reducing white draperies, until the average white dress looked as though the subject had travelled in mud waist deep. Now comes the worked-in backgrounds. Because the addition of a cloud or a horizon line or a faint suggestion of a tree-trunk placed in the proper place will balance a picture and give relief and atmospheric effect, we are putting in dense forests and the subjects are secondary to wood lots. Avoid extremes.

When I packed my 99-cent black-varnished paper grip and left home and walked ten miles in a rainstorm to a village to work for five per, I landed in a boarding house not far from a slaughter house, and about all they fed us was liver. It was good liver, but even I, poor as I was, could not stand liver all the time. So we made a kick, and after several attempts at cooking round steak the cook at last succeeded in preparing one steak that was a wonder. If you think that that cook, in consequence of the luck she had in getting one steak right after several attempts, landed as chief chef in some big hotel you are greatly mistaken. We left and went somewhere else, and they got more boarders and fed them on liver, and they left, and then they closed the house. If you can cook steak for conventions, cook steak for your patrons.

I never shall forget, when a child, my parents moved from one village to another. I had one brother who was more advanced in his studies than I. I determined to beat him in this way. I told the teacher in the new town that an examination would not be necessary; that I wished to take up so-and-so. I bluffed him for the time being, and at noon I told my parents that I was ahead of my brother, but when I returned home from the afternoon session I said nothing. The teacher put me back four years in four minutes, and the books of philosophy, astronomy, geometry, and algebra were taken from me, and I have never seen them since.

Were it possible to put us back to school and let our photographic ability mark the class we are in, what a variety of classes there would be, and how few would be in the college course. So it is

up to us to study. Let us look ourselves over, not with a contented mind made so by flattery or a line of credit, or a little of this world's goods, but look carefully for "rust spots," and we will be surprised at the number we will find. Then set about to wipe them off. The world is advancing at a rapid pace, and photography is keeping a pace with other industries. The exhibitions on the walls here demonstrate the fact, but we did not all make them, but we can all make equal to the best of them, not in one year, but in time.

There is a great future in photography, and the public never paid the prices for good work that they do today. I do not refer to the work of twenty years ago; I mean the up-to-date work. When we see 15-cent hair-cutting establishments doing nothing while the 25-cent ones next door are doing a good business; when we see this same thing followed out in all lines of business, I am still more strongly convinced than ever that merit counts in photography. There is no more cutting of prices today than there ever was. The oldest city photographer will bear me out in this statement, but in your advance be careful where you step. Too many are advancing backward. See well that your pathway is well lighted; ascertain from your customers whether they are as well pleased with their last pictures as they were with the ones before. Work to please your customer, and put in this work all the feeling and merit that is at your command, and you will succeed. As I have said before, the public is the court and that decides our fate. They are a just court; they are the ones that sift the chaff from the wheat; they want the goods and are willing to pay for them; perhaps not in all localities will they pay the highest prices, but they will pay a good living price to you if you deliver the goods.

I was standing in the streets of Providence one evening last spring, listening to a dozen business men holding a meeting and trying to lead the crowd to a higher and nobler life. They talked well and sang well and drew around them some 300 people. Finally one of the party invited the crowd to a nearby hall, where they were to continue the meeting, and expressly stated that no collection would be taken. They started down the street, but no one followed them. Across the street was a cheap vaudeville house, and they blocked the entrance for admission.

So it is with my remarks, for which I charge you nothing. But will you, or will you not, look for "rust spots?"

ENGLISH AND AMERICAN PHOTOGRAPHERS.

AN ADDRESS DELIVERED AT THE NEW ENGLAND CONVENTION BY MR. HARRY FELL.

It is rather trying for one who is not a speaker to come after one who is a speaker. You have listened to the talk by Mr. Collings this morning, which is one to be remembered. I could not help thinking, as I listened to Mr. Collings, the advantages that you people in this country enjoy over the English type, among whom I have been working for the last five years. The English photographer is much more conservative. Some people say that the New England people are conservative, but they appear to me to be just as spontaneous and open-hearted as I suppose you think the Western people would be.

The English photographer fails to get together like the American photographer. He fails to come in contact with his brother, and in that way he loses a great deal that he might otherwise have that would help him on the road to success. They have their conventions and have good times, but they have few schools for instruction. They do not seem to be able to get together to listen to advice from each other like we do in this country. They do not exchange ideas, but they do go out and have a good time when they meet, put up a few pictures, and then go off on a junketing trip.

The English photographer is a student. Theoretically he knows his business and the practical uses of many processes. I have often told people that the ordinary English photographer knows how to make exerything from gum prints up to bromides, carbons, and everything else. Another advantage the American photographer has, he specializes. The American photographer will use two or three processes and keep those processes bright. The English photographer labors under the disadvantage that very likely there is a process which he has paid no attention to for a while, and when he wants to use it he has forgotten most of his former knowledge. This is one of the "rust spots," as Mr. Collings has just stated.

The English photographer has at the present time a great deal to contend with, because the business section of England is going through just about what we did from 1893 up to 1897. Competition is fierce and prices cut all to pieces, but they will pull through that all right.

The English photographer, however, has one advantage which you gentlemen over here who are anxious to learn the arts of your business do not have. You have to depend very largely on copies and reproductions of oil paintings. The English photographer has the benefit of art galleries and studios.

I think that the better class of English photographers pay more attention to background as related to the subject than I have noticed on the walls here. Mr. Collings mentioned something about the background. They get more atmosphere, more roundness in the picture. I notice a picture hanging on the walls there of Mark Twain, by Will Burnett, of London, which shows what I mean by atmosphere and roundness.

Among the ancient people sunlight was worshipped as a god. I believe in putting sunlight into pictures. I believe in having sunny faces. Too low a tone of light gives you a gloomy feeling when you look at a picture.

No, I do not know what I can say to you gentlemen in this your last business session. I am not much of a talker, although sometimes I get started and run on for an hour or two at a stretch, but I will simply say to you, keep up your business meetings and conventions. Get together; keep up your social intercourse with each other. Speak well of your competitors, the same as the physicians and surgeons do, and the people will think well of you. That is one of the absolutely necessary things.

I do not know very much more that I can say. It has been a great pleasure to me to come once more to Boston, to shake hands with many friends whom I have seen over here, and I shall go back to England with the warmest, heartiest, and best impressions of the American photographer.

Shellac Mountant for Thin Mounts.—Make a strong solution of shellac in methylated spirit. Apply to both print and mount in a thin film and rub into contact. Does not cockle the thinnest mount.

MANUFACTURERS AND DEALERS AT THE NEW ENGLAND CONVENTION.

THE manufacturers and dealers made a very large and interesting display at the Convention. The various demonstrations were well attended and good business was generally reported.

The new ozobrome process, demonstrated by the Eastman Kodak Co., created much interest. The many advantages offered in this new process will without doubt make it a popular paper.

The Aristo School drew big crowds to the various demonstrations, and the large display of Aristo prints, attractively placed, was a centre of interest while the Convention lasted.

At the other end of the hall the Nepera developing papers attracted considerable attention.

Perhaps the most interesting exhibit was the new Graflex studio camera, made by the Folmer and Schwing Co., and on view at the stand of Robey-French Co. This is the camera that tied with the Towles flash-lamp for the $100 prize offered at the National. A full description will be found elsewhere in this issue.

The Artura Photo Paper Co. had a splendid exhibit of "Iris" and Artura prints. The constant crowd before this exhibit shows that developing papers are coming very much to the front.

The Defender Photo Paper Co. made a display of their papers.

The Curtis and Cameron Company showed their Harcourt sepia and black and white papers, prints being made all the time, demonstrating the simplicity of the manipulations, their wall space displaying some very fine examples of finished prints.

The Sprague & Hathaway Co.'s display was one of the bright color spots of the Convention hall. Some of their fine enlargements being finished in bright colors, made the display an especially attractive one.

Jos. de Nunzio made a very fine display of Angelo sepia prints and had the rare distinction of winning every first prize awarded by the Convention, including the grand portrait gold medal.

The Anthony & Scovill Company made a large and interesting display of studio cameras and some fine prints on their new portrait cyko.

The C. P. Goerz American Optical Co. were well represented and ran a complete studio outfit, making portraits with their well-known portrait lenses under the new Farquhar lamp.

Papa Cramer, with his genial presence and some fine negatives made on Cramer plates, was much in evidence.

Geo. Murphy, Inc., showed a full line of their well-known specialties, including the Ross lenses. Their new tank developer was creating much interest and selling well. The tank method of developing has come to stay and is well worth looking into.

Mounts and folders were well represented by Taprell-Loomis Co., A. M. Collins Co., the Bridges Manufacturing Co., and the Carter-Rice Co.

The Prosch Flashlight Co. made a display of their specialties and secured a good negative of the exhibition hall at the busiest time of the busiest day.

Frederick Pohle, Buffalo, N. Y., showed an ingenious baby holder that is going to be a great help to the photographers when taking the baby.

C. O. Lovell was showing a good line of prints made on the Dresden photo paper, and also interesting photographers in the coöperative plan of plate buying from the United Photo Materials Co., of Lewiston, Me.

THE NEW GRAFLEX FOR STUDIO WORK.

AMONG the novelties shown at the National and New England Conventions that which attracted most attention was the new Graflex studio camera and stand introduced by the Folmer & Schwing Co., of Rochester. We give a description of this new studio outfit by Mr. W. F. Folmer:

"The ability of composing and focusing upon the subject up to the instant of exposure, focusing with positive lighting, as the mirror intercepting the rays of light reverses the light from negative to positive. For child studies the deceptive lens fitted on the opposite side of camera from focusing hood gives the impression that the photographer is photographing in the line of vision instead of at right angles to this line, which will enable the operator to place a subject in a position in the gallery in line with this dummy lens and enable him to get children's pictures without the subject's knowledge.

"A magazine holder carrying twelve plates loaded into septums, or twelve cut films loaded into septums, shifting by a simple pull and push of the dark slide.

"Swinging mirror placed in focusing hood permitting the operator to focus from the top of hood when the camera is in a lowered position. This mirror swinging up and out of the way, permitting focusing from the side when camera is in an elevated position. When camera is in a lowered position, for child studies, the focusing being observed from the top of focusing hood, the subject is viewed by reflection on the mirror in a correct position, right side up, with positive lighting.

"*Adjustments.* The camera stand is elevated by pressure on the long lever with the foot and lowered by pressure on the adjoining short lever. The camera may be elevated or lowered to any desired position within the scope of the stand's adjustment.

"The locking lever directly to the left of the releasing lever permits the stand to be elevated on its base and locked at any desired point by swinging this lever to the left. It stands twenty-four inches from the floor and has a rise of eighteen inches additional.

"The axis of the camera may be depressed or elevated by turning the worm-screw directly under the tilting bed.

"The mirror should be set before setting the shutter. The shutter is arranged for time and instantaneous work. The range of instantaneous exposures will vary from one-two-hundredth to one-fifth of a second. Base is fitted with ball casters."

By R. Dührkoop, Hamburg

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HISTED—PHOTOGRAPHER OF CELEBRITIES.

BY SIDNEY ALLAN.

THERE is really no such thing as a photographer of celebrities. No professional would be sufficiently unwise to devote his portraiture to celebrities only. It would hardly prove profitable. Celebrities are very much like deadheads at a first night. They expect privileges, and it is the fault of the photographers themselves that it is so. Celebrities are used to be chased after, and only cajoled into studio visits by some "publication and free-print" inducement. The gallery owner in turn uses their names as a vehicle of promulgating his own. It may be good advertising, but it does not (unless the sitter be an Evelyn Nesbit) increase the bank account.

I merely apply this term to Histed, as he was for years specially fond of posing as such. Whenever he appeared in print in newspapers or popular magazines (he tabooed the photographic press) he was heralded as a great interpreter of great people. I once read a long account of his photographing the Pope, and do not know to this day whether it was a wild-goose story, or whether he was really promenading at the time in the gardens of the Vatican. I suspect he would now prefer to be called the photographer of the exclusive set. I hear that he has made quite an inroad into polite society. He belongs to the coterie of Newport and summer-resorts' photographers, and apparently is one of the most successful of them. There is a regular invasion of camera artists at Newport every summer, and it is a mystery to me as to many others what the aim and object of these annual pilgrimages may be.

Mr. Histed himself is decidedly exclusive—that is, in his profession. He does not care a snap for what is going on in photographic circles. Strauss and the Western boys are good mixers, and so are the members of the Boston Saturday afternoon Café Thorndike clique.

The New Yorkers and Philadelphians are by far more sedate and business-like in their casual meetings, while some, like Davis, Eickemeyer, and notably Histed, simply attend to their business and let it go at that. They have no use for section work, conventions, etc. During the day they are photographers and afterward whatever they choose to be. It was at a dinner when I saw Mr. Histed at his best. He apparently likes to dine, but he prefers to dine in other society than that of his brother craftsmen. There are such men in every profession who are tired of talking shop, but that does not necessarily denote in them a lack of interest in their vocation. On the contrary, it often means a superior independence and concentration. Many of our best painters are hermits as far as the doings of the rest of the art world are concerned.

But enough of personal comment, although helpful no doubt in making up a final, more-rounded estimate of his personality. What my readers are most interested in is, after all, the peculiar position which Histed occupies in professional portrait photography.

If there is and can be such a thing as *the one best* print made by a professional (I have often been asked the question) I would without hesitation answer: the most artistic print made by a professional that I have ever seen was one of Histed's (and I have not forgotten Garo's Hubbard and Proctor either). I saw it at

Steffens's studio; it represented a boy with a dog. It was a remarkable achievement. It was clear, distinct, full of definition, and yet exquisite in its tonal quality. The figures were posed in a masterly way, and there was something about the portrait, in the conception of it, which was painter-like (in the true sense of the word, in no way imitative), though the final result was truly photographic. I must confess I have never seen another specimen of Histed's craftmanship that has impressed me in the same way.

His work is always of a high artistic standard; I mean by that vastly superior to ordinary good professional portraiture; but he seems to lack discrimination; he falls into ruts and sometimes for several seasons fails to get out of them. There was a time when his backgrounds were hopelessly muddy and opaque, and when everything of value in the composition was lost in dismal tonalities. He was at all times very near to being what Hector MacLean calls "an exponent of awkward and unprecise Americanism." He was closer to the Secessionists than all the others who have claimed that distinction (or is it indistinction ?)—Hollinger, Pierce, and Garo. He was a tonalist almost to his own undoing. What his prints lacked in accurate photography they did not always gain in esthetic rectitude. His prints give plenty of evidence of the undiminished energy with which he seeks the most interesting phases in a sitter's personality, but a certain crudeness which is palpable despite all technical exquisiteness and superior artistic intention—it is difficult to put one's finger on the sore spot—often spoils the final effect, at least for me.

Unlike Stieglitz, who permits almost any amount of juggling with the negative, although he recommends the utilizing of light to modify the effects of the prints, Histed does not give the cold shoulder to the best indication of the negative by means of brush manipulation and other similar work. He rather belongs to the Eugene-Demachy clan, who care not a jot for straight photography, but only for the print which they can produce by means of the camera plus any amount and kind of handwork which they may choose to add to the negative.

Take, for instance, his portrait of Richard Mansfield. Aside of that by Falk in the part of Baron Chevrieul, it is probably the best portrait that has ever been taken of this actor. I presume you all have seen it. It is a profile view. The actor is presented in a studious attitude, with his head slightly bent forward, his hands holding a sheet of manuscript. In the lower right corner is a suggestion of a table with book and a burning candle. The treatment of the face is excellent. The line of the profile is cleancut like that of a drawing, and yet not obtrusive. It merges into the background and looks as if it were, as in real life, enveloped in atmosphere. The hands, the frock coat, the background, even to the signature (Japanese in tendency), were all well handled. The face, the largest light plane in the picture, although a trifle darker than collar and cuff, holds the main interest; everything else is subdued to it.

At the first glance it seems to be in every way a satisfactory picture. But lo! that miserable candle on the table which looks as if it might go out at any moment. The light has been put in artificially and it is very badly done; no candle ever burnt that way. And what is worse, the whole lighting scheme thereby becomes faulty. Granted that such a miserable specimen of a candle could yield any light at all, it would throw its strongest lights and shadows upon the books and papers. There is no indication of that. Well, one might

argue, the photographer kept these parts under control, as he wanted to reserve the strongest high light for the accentuation of forehead, nose, and chin. Histed was after a particular light scheme, and, true enough, those parts of the face just mentioned carry out the effect of candle-light. But how does it happen that the collar at the nape of the neck and the back part of the hair are kept so bright as to suggest illumination from the top? The more one studies the picture the more faky the composition becomes.

If a painter of repute would do such a thing the whole profession would laugh at him. Why should it be permissible in a photographic portrait? The painted-in candle-light is only one step from the scissors and paste pictorialism of Herzog. Are we really going farther and farther in this peculiar paint-pot photography? Or is it merely the extreme swing of the pendulum that will usher in the return to straight photography? Is Alfred Maskell, the ex-director of the London Photographers' Salon, right in asking "for an exhibition where nothing would be admitted that has a 'photographic character' only, as pure photography is but the equivalent of pianola art?" Or is Clarence H. White right who said to me only a few days ago that he was convinced more than ever that the purely photographic qualities in a print would finally win out?

This very same argument estranged me from the Secessionists several years ago. It would be amusing if they sooner or later had to wheel around to the viewpoint which I have upheld for the last eleven years.

But to return to Histed. He has more spirit and élan than most of the professionals. And although one might regret that he is frequently willing to sacrifice his finer qualities of conception and technique to mere pictorial fads and fancies, one cannot deny that he, like few, has added touches of superior culture, grace, and elegance to portrait photography, and has raised it to a higher plane.

A PASSAGE IN ANCIENT PHOTOGRAPHIC HISTORY.*

It is not always an easy matter to trace the genesis of ideas, and yet it is often interesting to make the attempt. This is especially true of ideas that have led to useful invention. I have been asked to explain what it was that originated in my mind the ideas which led me to invent the carbon process, and I have found the question not easy to answer, but, of course, I know that there were many steps in their evolution. One of these probably was my early acquaintance with the photographic properties of the salts of chromic acid. I began to make photographs long before I was out of my teens. My first essay was the printing of the outlines and veining of leaves on paper washed with a solution of potassium bichromate, according to the process of Mungo Ponton. It was simplicity itself. Only one chemical was needed and plain paper. If the paper were well sized, so much the better. The only apparatus required was the popular toy of those days (1842), a transparent slate, that is, a wooden frame with a frosted-glass front and a wooden back with a cross-bar to hold the back in position. The leaf or

*An address given by Sir Joseph Swan, before the Royal Photographic Society, London.

group of leaves (the frond of a fern was a favorite subject) was laid flat upon the glass pane, the dry, yellow, sensitive sheet upon it, and the frame exposed to the sunshine. A quarter of an hour or so would give a strong brown impression, which only required to be rinsed and finally soaked in several changes of water to give it complete permanence and render it quite insensitive to light. It was in that way I made my first photograph. I say that perhaps it was this early acquaintance with the photographic susceptibilities of potassium bichromate that led me long afterward to probe farther into its photographic properties, and to become identified with several of its useful applications. For the principles underlying Ponton's simple process afterward became abundantly productive, and today they are embodied in the most important methods of photographic printing and photographic engraving.

Fox Talbot—the true father of modern photography—made excellent use of them in his process of photographic engraving published in 1852; a process from which with large modification modern photogravure was ultimately evolved.

They also gave rise to all the early attempts at carbon printing, and, as I have said, probably influenced me in making the attempt to enlarge its capabilities.

I had dual objectives in my mind; one of these was photographic printing with pigments as the coloring matter of the pictures—the other was utilization of the indurating effect of light upon gelatine in combination with a bichromate for the purpose of obtaining a relief with gradation of height in the relief, exactly corresponding to the gradations of opacity and transparency in the positive or negative employed in making the print from which the relief photograph was produced. These reliefs I used as a step in obtaining molds, the reverse of the reliefs, and from these molds casts in colored gelatine, which were in fact prints mechanically produced closely resembling those produced directly by light.

It may not be quite without interest to the readers of the *Journal* to learn how the "carbon process" was introduced into France, where, through the enterprise of Braun of Dornach, it has been the means of spreading far and wide fac-similes of the studies and sketches of all the great masters of Europe.

I had sold my French patents for pigment printing to Adolph Braun, and I was invited by him to go to Dornach to instal the apparatus and show the working of the process at his works: that was in 1866, when the war cloud soon to burst in thunder over France was ominously gathering. It was my first visit to Alsace, and was very interesting in many ways. My host, Mr. Braun, was a strong personality, an artist carrying on a large business in the production of designs for the Mülhausen calico printers. He was, at the same time, a great photographic artist, with very clear and very original ideas. He had established a large photographic business in panoramic views of Alpine scenery, and the production of copies of the studies of the great masters from the Louvre and the other great picture galleries, and this business was carried on side by side with the artistic designs business.

I found, on my arrival, that I was not the only visitor there with the object of demonstrating a new photographic process. There were two other gentlemen present, each with a similar object—M. Tessié de Motay and M. Rousseau. Mr. Braun had intended to use my process simply for his Alpine panoramas in substitution for ordinary silver prints, and that was the purpose to which it was

at first put. But during my visit I noticed that experiments were going on to demonstrate the suitability of a new chemical process invented by M. Rousseau, which was adapted for the reproduction in similar colors of the studies of the old masters. This led me to point out to Mr. Braun the perfect suitability of my pigment process to that kind of work, seeing that it gave not merely an imitation in respect of color, but was identical in the actual material of the pigment used. I told Mr. Braun that I had produced many photographs in actual sepia, actual red chalk, and actual graphite in imitation of the peculiar gray of pencil drawings.

A messenger was despatched to the neighboring town for some "sanguine." On arrival, this was immediately used as the coloring matter of a band of tissue.

That night it was dried and next morning a print in red chalk was made from it, greatly to the delight of Mr. Braun, who at once saw that pigment printing had a greater *role* to play than he had imagined, and that not so much the panoramas as the studies of old masters would most quickly repay him for the expense he had gone to in the purchase of my process.

I fear that M. Rousseau was not equally happy, and I have always felt sorry that my accidental intervention could not be very agreeable to him. Nevertheless, I believe we parted very good friends, notwithstanding there was to some extent a conflict of interests.

That was the beginning of pigment printing on the Continent, and I hope I may be forgiven the egotism of saying that it is with great satisfaction that, in travelling abroad and visiting schools of art, I see that the energy of the great house of Braun has never slackened in that useful field of photography—pigment photographic reproductions of the studies of the old masters.

FLOWER PHOTOGRAPHY.

BY EDWARD SEYMOUR.

[GOOD flower studies have a commercial value and sell readily in the art stores and amongst artists and designers. The following interesting and practical article on their production is taken from *The Year Book of Photography*, 1907–8, recently published in London, and for sale in this country by G. Gennert, New York. Price, fifty cents, postage extra.—ED. W. P. M.]

Love of Flowers Essential to Success.

Many folks ask me how it is I am so successful with my studies of flowers and fruit. They suppose I have the finest apparatus, a lovely studio, and many secrets. My only reply is: All the secret about my work is that I am devoted to it. I love my subjects—they form a part of my life, and it thus becomes a pleasure to work with them. In fact, I cannot leave it alone whilst I have any plates left, and as each season comes round, although I may have a good negative of a particular flower, etc., I cannot resist the temptation to take it again. (I wish writing this article describing my methods was as easy as making a dozen good negatives.) I venture to state that all readers of this article can be more successful than I am if they will only cultivate the love

of this hobby. So many, after a few trials, give it up, instead of pegging away at it. The late Dean Hole's quotation is worth remembering: "He who would grow beautiful roses in his garden must grow beautiful roses in his heart."

I am, indeed, pleased to know that this last two or three years quite a large number of photographers have taken up this charming branch of study; its advantages, in comparison with other studies, are many—the most important in its favor; there are no long journeys to take. It can be done at home, with the most ordinary apparatus, wet or fine. Specimens are cheap, can be obtained at any time. The grasses, "Wheat" and "Oats," were dried and in house two years before I photographed them. It will make the worker more careful in technique, careful in the focussing, careful about pinholes and scratches, perfect in development, and will fit one for any other branch of the art.

Apparatus.

As regards the apparatus, I use a whole plate field camera (on its last legs), and for the 12 x 10 an old camera which I offered to several people for 12*s*. I am glad now they did not purchase it. I now have a good lens, whole plate anastigmat working at *f*. 6. I use this for all sizes, even 12 x 10. I worked with quite an ordinary lens for some time —it is only the question of stopping down; and when one has to make a time exposure, a trifle longer on this score does not matter, but, of course, I like a good lens best.

For arranging my "sitters" I use a large packing-case—a plain table, of course, is most useful for moving about, and on this I have a large drawing board, on the bottom of which I nail a 9-inch board at right angles, forming the letter L. A strut at one side keeps it together, and this forms a background and a support for vases or grouping of fruit.

My studio is part of a coach-house, boarded up about 3 ft., and the rest glazed, size 9 ft. long, 4¾ ft. wide; such a light as one can get from an ordinary bay window.

All my work is done indoors; the great difficulty is to control the lighting and protect from wind in outdoor work. When I have to take botanical specimens growing, I use movable backgrounds and shade the subject. If fairly still, I give as quick an exposure as I can, and if wind is blowing I use the slowest plate I can get, use the smallest stop, and give the longest exposure I dare, and I generally get a good picture in windy weather.

Always have at hand plenty of various-sized pins, from one-half to three inches long (blanket pins), black and white, stiff florist wire of various thickness, hammer, fine nails, scissors, etc., jars of sand, and medicine bottles, various sheets of colored picture-frame maker cardboards.

I must not forget to say that I use a cheap studio stand for camera. I used to use a tripod, but the time wasted in getting it just in the right position, and then moving, was frightful, and the sweet words wasted over that tripod will not bear repeating.

Why and Wherefore.

Now, before describing how I work, please understand I do not set myself up as a teacher, nor do I say my methods are the best. I know little about the theoretical side of photography, what little I know is of a practical nature, and what I want is to get the very best picture that is possible to be obtained. It is the finished result I want, and I care not if it is contrary to theory or not.

I have had people talk with me for some time, telling me I must use this or that or it is impossible to do so and so. I used to listen and try various things, but when I meet any of these teachers now I want to see their work—the finished result—and it is a funny thing there is nearly always some excuse when the finished article is shown—"something went wrong" or "this is a bad print."

I gave a photographic society an evening on flower work recently, and several plied me with questions—What color screen did I use?—and as they kept it up I asked them a few questions, and I found that at the previous meeting someone had been lecturing on color screens, and laid down certain laws, etc., whilst my arguments were contrary to what had been said, so I had to fall back on the "practical" again. I showed seventy slides and a quantity of studies. I asked that they should pick out those that were wrong in color or tone value, but instead of finding fault I got praise. *I hardly ever use a color screen for my work.*

The Method of Working.

My method is: I give an exposure that will give the colors a chance, and I use control in development. I well remember using the above words, and someone jumped up and said investigation teaches us that there is no such thing as control in development. Then the fun began. I wanted to see the finished result again. Could the gentleman point out a mass of high lights in any of my studies where detail was absent, where the half-tones were robbed? He could not find any. My answer was, I controlled my developing to this end; I knew how far to go by looking at it, by altering it, if necessary, by application of judgment (just as much care required now as two years ago). I will refer later on to developing.

I may say here that, after trying almost every developer on the market, I find nothing better than pyro-soda. I use this strong in pyro, about six or seven grains to the ounce. I do not use bromide in my developer, as I find it retards development and clogs the shadows or lower tones, and there are generally green leaves in my studies which I want out.

Plates, Prints, and Negatives.

It goes without saying that I use Ortho plates—extra rapid—and always *backed;* they are well worth the extra cost.

As regards printing process, I think there is nothing to beat platinum. It gives pluck and vigor for flower and fruit studies. I believe I am not alone in this opinion.

My negatives are mostly soft, and to get a good platinum print I overexpose, print right out, in fact, and use a black-giving developer, diluted two or three times with its bulk of water, keeping it as cold as possible. In summer I use ice for the purpose. After platinum I prefer bromide paper—one can get this soft, medium, and hard, and one can adapt the paper to the negative.

For "self-colored" prints, such as studies of nettles, hops, and oats, etc., I use green carbon; and if I get a very contrasty negative (which I rarely do) I use carbon. I venture to say, with so many papers on the market, one can find something suitable for almost any negative.

Arranging the Flowers, etc.

After these rambling remarks I will now describe in detail my "sitters," and how I arrange and photograph them.

Whatever flower or fruit is selected I secure, if possible, overnight. Never

photograph flowers directly they are cut; the act of cutting them gives a shock, and undoubtedly causes them to droop, but if left in water overnight, or for a few hours, they will regain strength and stiffness.

It is wise not to mix colors, such as white, orange, and red, in the same group, as each of these colors requires a different exposure; one color will have to suffer for the other.

Having selected my subjects, the background should be selected with care. I use white for red flowers, so as to give contrast; also if I require a "self-colored" picture, such as "hops" or nettle, in green, so that the white back will be washed away during the development of the carbon print, and leave the subject standing out in color.

For delicate and small flowers, such as narcissi, daffodils, and similar subjects, a gray or light-brown background should be used. If a heavy subject, such as chrysanthemum, dahlia, or a heavy massed fruit spray, is being attempted, use dark green. The reason for this is, the darker the background, the softer the shadows; and between these heavy, large blooms the shadow will be almost clear glass in the negative, whatever background (apart from white) is used. Hence, if we used a light ground, the outsides of the picture would be light and the shadows nearly black, thus giving a hard effect. I have seen splendid work, perfect in quality and arrangement, spoiled by an unsuitable background.

Having selected, say, some narcissi, and a light-color background, we have now to arrange our study. This, to me, is the most difficult part, especially if we want to make a picture, and not merely reproduce a botanical specimen.

The blooms should differ in size, and not be too many. The great aim should be simplicity and gracefulness; therefore, have the largest and best blooms in a prominent position, and all the other blooms subordinate, but *not all facing one way*. Sometimes a bloom turned right round has a pleasing effect, and adds to the composition.

Do not overdo the group with leaves sticking out in all directions; we should see the blooms first, and the leaves last; in fact, we ought to find the latter only by looking for them.

We can adopt one of two methods in arranging our study; either arrange the group in a bottle, and wedge up with cotton-wool, or, as I mostly do, secure the blooms to the background by pins. If a little care is used these pins need never be seen. The bottom of the stem should be fixed first, and pin again right under the bloom. This plan I find best, as it prevents movement, and we can make the bloom remain in any position if desired.

Most beginners in flower photography are far too gentle with their flowers. I make them go the way I require them when grouping. Such blooms as pansies and dandelions I always run a stiff wire (as supplied by florists) right up the stem. This done, one can twist, bend, and curve them into any position. Even the leaves of dandelion will have to be wired, as they rarely recover their freshness and life when once plucked. Having wired the stalks, the best plan, and one that I can recommend, is to stick them into a potato, pushing the wire in until the stem touches the potato. The flower can thus obtain a little moisture. It is then easy arranging the size of the picture to just miss the potato.

Personally, I rarely take a picture of a natural spray as it grows, as it is not often it makes a good composition, and it will be found necessary to strip off the bloom and build up the composition as decided upon previously.

(To be continued.)

THE NECESSITY OF BETTER WORKMEN.

BY C. H. CLAUDY.

I SUPPOSE I shall get myself disliked when I say that the standard of photographic workmanship, among the workmen, is low. The men who actually do the work—the printers, operators, retouchers, view men, etc.—maintain a low standard, not a high one. That so many photographers have made brilliant successes of their work, and created name, fame, and fortune for themselves, is in spite of this condition and by a process of trial and elimination which has secured for them the best workmen to be obtained.

The standard of workmanship is low, but that does not mean that all the photographic craftsmen have a low standard. Far from it. Some there are who bring to their work, love for it, intelligence, enthusiasm, willingness to study and improve. These are the ones who gradually work out of the ranks into the positions of responsibility, and finally graduate to be owners and proprietors of galleries.

I refer to an issue of a photographic journal, and find the following haphazard:

Position wanted, in first-class studio, by printer and general assistant, $15.00.

Experienced man wants position as printer and general assistant, $18.00.

Experienced photographer, can operate, print, finish, spot, develop; thirty years old, can do ten-minute post-card work, willing to work, $15.00.

These are samples. From fifteen to twenty dollars a week seems to be the average wage which the man or woman out of work can get. Yet fifteen dollars a week is less than many an apprentice gets in a trade not requiring half the brains, experience or practice that is required to make a good photographic workman. And the trouble is not with the trade, but with the men.

Now just consider the following experience: A gallery proprietor has had for years a job of photographing, every June, the graduates of a large girls' school. He makes about one hundred and fifty sittings, and of course as the sittings are all made in two or three days, one right after the other, and as he gets a good order from each one, the work is very profitable. From this he naturally worked into getting the view and interior work which is being done at this particular school—a very large one with two scores of buildings—work which is done all the time for advertising purposes. The photographer is unable to do the view work himself, so he takes the commission and farms it out to anyone he can get and pockets his profit with the sigh that it isn't bigger. Recently, there was some more than ordinarily difficult work to be done—panoramic interiors, triple exposures, combination flashes, and daylight-window, screened work, and fires in fire places, etc. Man after man he sent out, and man after man came back with failure after failure. The gentleman for whom the work was being done was disgusted and impatient; the photographer was at his wit's end. He came to me and asked me if I could do the work. I told him I didn't know until I saw it. He asked me to try. I named a price. He objected—said it was more than he paid the other fellows by the week, and mine was by the day. I told him I wasn't anxious for the work—that my work was illustrative,

entirely, but that I would go to oblige him if he wanted to pay. Incidentally, I told him if I didn't do the work I didn't want the pay.

Well, I went. I found some difficult photographic work laid out for me, but not a thing that any one couldn't do who had common sense and understood ordinary photography. And the tales I was told of the workmen who had come and gone would make a Sphinx smile. One man had, with apparent pride, told the owner of the way he took interiors—covering all the windows with curtains and then removing them after the main exposure had been made, in order to get the outdoors in the windows. The owner had a couple of workmen screen the windows. After the exposure was made the photographer moved his camera. The owner reminded him of the screened windows.

"Oh, I forgot!" he said. Whereupon the idiot put the camera back in the same position, as "nearly as he could get it," and exposed for the windows, and *didn't* make a duplicate plate. Anyone with one-third the sense the law allows knows you can't move a camera and replace it and continue the exposure. The open windows came into the walls, of course. A second workman left windows open on blowing drapery which, of course, took as a blur. A third—but why multiply these tales? I did the same work with my eyes open and thinking what I was about. I produced a first-class set of negatives, and now the owner won't have anyone else to do his work but me. This sounds like a great big puff for Claudy. But anyone, you or the other fellow, even the dubs who fell down on the job, could have done just as well, possibly better, had they only thought. They were careless, and when not careless they didn't know. And as it was their business to know, I say their standard of work was low.

Another photographer came to me not long ago with a whole bunch of spotted sepia platinum prints. "My printer is turning these out by the hundred," he said, "and it keeps three people busy picking out the spots. For Heaven's sake, what shall I do?" "I think I should discharge the printer," I said, "as soon as I could. Meanwhile, suppose you try buying a brand-new set of porcelain trays and using some fresh solution and stand over the printer with a gun and see that he washes his hands now and then." The printer was using a cracked porcelain tray and a sheet-iron tray with half the japan worn off—his other porcelain tray had been broken. Do you think he was abashed? Not a bit of it. He said: "I don't believe it was them trays—it was that———bum paper." What can you do with a man like that?

I know as well as anyone that there are accomplished, educated men doing photographic work. I have seen them at work, clean themselves, clean in their work-rooms, and clean and clear-cut in their results. But I say again they are the exceptions and not the rule, and if there is a demonstrator on the road with the courage to tell the truth he will uphold me when I say that dirt and ignorance, rather than cleanliness and knowledge, is the rule among the rank and file in photography. And just because it is the rule, and just because it is so barren of good results, the trade as a trade is low paid and ill rewarded.

One of the results of photographic ignorance has been the slowness with which the development paper has caught on in high-class professional work. Another result is the gold mine of bromide enlargements which is so utterly undeveloped in nine galleries out of ten. Development paper and bromide paper are harder to work properly than the *pop* papers, and the staff can't handle them. Thus the experiments

are either made deliberately to get poor results, or so unskilfully that poor results cannot help but follow, and the process is condemned.

To revert to the school and the negatives again, this photographer farmed the negatives out to someone, who made velox prints at fifteen or twenty cents each on eight by tens, and the customer was much disappointed. He thought his prints were going to be like the proofs. When I remonstrated with the photographer and kicked at having a good job spoiled in the printing, he was amazed—said he thought any kind of a print would do to reproduce from.

The second time I made such negatives I made the prints myself—solio, of course, and carefully made, and the reproductions had a show of being reasonably good. You who read may think the photographer who employed me may object to my speaking so plainly? Well, I haven't mentioned his name, and I doubt if he knows that there is such a magazine as this, let alone reads it.

Now, the remedy for this state of poor workmen, irresponsible and without pride in their work—where does it lie? Is it to rest with the workman himself or with his employer?

In my opinion, which is probably worth little, it must rest entirely with the employer. It is not enough that he refuse to employ only the best—it is not enough that he is willing to pay for the best—he must see to it that those who have the disposition and the willingness to be good workmen be given the chance. "Yes," says some professional, "train up a boy the way he should go and then have him leave me for my competitor." Well, your competitor probably was willing to pay better wages, and if he could afford it, you could. The trouble is, if a man trains a boy to be a good photographic workman, he seems to think the training is pay for the goodness, and the wages of a poor workman remuneration enough for the work done. It is hardly unnatural for the boy to look at it differently. See that your workmen are good workmen, and pay them good prices. "But," you say, "to do that I have got to be a good workman myself."

There is the meat of the whole matter. If you would have good workmen under you, you must know how to do everything you ask them to do and to insist that it be done your way. If you dislike dark-rooms, hate the smell of chemicals and never enter your printing-room, you will not only fail in getting the good results your money is paying for, but you will lose a vast amount of both money and business you ought to have. I can go into three dark-rooms within a quarter of a mile of where I sit as I write this, and point out no less than three separate and distinct channels of waste of money and material. I can show anyone who wants to go, where and why these workmen are poor workmen, and where and why the owners of the galleries are not making more money. And the reason back of it all is that the owners and proprietors are not practical photographers. They have not kept up with the game they are playing—it has marched on and left them where they were some ten to twenty years ago when they started, and so they are not competent to employ, train, or use good help.

To be quite fair, I think I should mention at least one establishment where no one who isn't a good workman can set his foot, and where the profits are enough to pay fine salaries to the good workmen who make the profits possible. Suppose a platinum printer gets three dollars a day, and uses in his work twenty dollars' worth of paper. Suppose another printer gets the same

number of prints from fifteen dollars' worth of paper, but gets five dollars a day. In the one case the expense is twenty-three dollars—in the other, twenty dollars. The more expensive workman is the better. This may be an extreme case, but it was cited to me by the owner of this gallery I have in mind. Here every possible convenience is installed. The dark-room is a large, airy room. There are two electric fans in it. The sinks are always clean and painted. There is no broken glassware. The work-room is cleaned twice a day by an office boy, whose business it is and whose pride it is to keep it spick and span. There is not a piece of broken apparatus on the premises. There are no mended printing frames. The chemicals are bought in quantity and kept in a closet by themselves. There is but one rule in the whole outfit—"cleanliness and order" —and advancement and increase is made contingent upon this rule. Once a week the owner will meet and talk over with his men any and every photographic problem that may come up. Every demonstrator on the road goes to this place by special invitation every time it is possible. Everything new that looks good is tried, and the owner helps in the trying. Here, then, is a place where good workmen are developed. The only trouble is, they won't leave, and only enough are made to satisfy the home consumption.

The standard of today in photographic workmanship, of the workmen themselves, is low. The wages are low as a result, and a lower and lower grade of workman is being attracted all the time. The remedy lies, not in unions and associations, since you cannot legislate water above its level, but in education—and the education must commence at the top and spread down. When the owner knows what his workmen must know, and when he insists upon their knowing it too, and is willing to teach them if they do not know, then and not till then will the standard rise. Meanwhile, everyone suffers; the workman from his low salary and the owner from the workman's poor work.

You who read this, and think "that fits Smith across the street, exactly," are you sure there is no beam in thine own eye?

ART STUDY AS A BUSINESS INVESTMENT.*

BY G. HANMER CROUGHTON.

BUSINESS has been the principal topic for papers and discussions at the various State conventions during the last two or three years, and the last National convention at Niagara was heralded with a great flourish as "strictly a business convention." Art was played out; photographers did not want art; it was business, business, and how to entice the almighty dollar out of the pockets of the unwary sitter. And yet at that strictly business convention, one of the longest, the most theoretical, and unpractical papers upon art was read, that was ever presented to any convention. It was full of soul and high ideals but, as one of the hearers remarked—it gave no hint as to how the soul was to be educated so as to enable the photographer to climb to the heights occupied

* A paper read before the Indiana Photographers' Association, July 8, 1907.

by the writer and reader of the paper. I am fully convinced that the revolt against the so-called "art teaching" lectures or papers is to be traced to the very unpractical soarings of the theorists, who lost themselves on high flights of fancy, while their hearers, not having gas enough to follow, were left upon the earth to wonder where they were going, and some of them, trying to follow, came down with a thud that knocked all wish for art flights out of them.

Now I want to show that putting a veto on all art matters in connection with photographic conventions is the most unbusiness-like step that has ever been taken.

When a manufacturer wants to get a better price for his goods, what does he do? Why, he raises the quality of those goods, does he not? In the same way, if the photographer wants to get a better price for his portraits and to raise the status of himself and his establishment, he must produce a better article. That is "business," is it not? The question then arises, How shall he raise the quality of his portrait? Is it enough, do you think, to print the same style of negative on a more expensive paper, or put it upon a more expensive mount? That is one way which has been successful to a certain extent, but those expedients are open to any mechanical worker; but does it make the portrait better or really worth the few cents extra in the cost of paper or mount?

We have the authority of a well-known journalist that practice and experience in photographic manipulations are of no account, for he made the plain statement in this hall, to the assembled photographers (some of whom had had many years of experience) that a boy of twelve years of age, who had never used a camera before, had, with only the purely mechanical aids of an exposure table and the three Ts—time, temperature, and tank—made negatives such as none of the assembled photographers could beat, so he stated. I have no doubt there are some present now who heard that statement made. If this is true, and the statement is being repeated in other quarters, it is useless to look for other increase in value through or by the photographic manipulations. Where else have we to look for the improvement in the quality of the goods that will justify us in asking a higher price for our work, and will satisfy the public that the value is there? I say most emphatically, without fear of contradiction, that only in the pictorial quality of the work can we hope for an improvement in the status of the profession, and with it the improvement in the prices obtained for the work. Is not this, then, a business proposition deserving the attention of photographers as much as the conduct of the operating room or the competency of the reception-room attendant?

Now, I do not wish to be misunderstood. All these things are necessary and good and deserve attention, and the Indiana Association does well to organize classes for instruction in the various mechanical manipulations—that is as necessary as the art student's training in the use and manipulation of his colors and brushes; but those are only a means to an end, and the end shoud be the highest that can be attained by a combination of the technical and the pictorial.

Mr. Allan, in an open letter to the photographic press, has pointed out the absurdity of attempting to teach in a few hours what it will take a lifetime to learn. This is to a certain extent true, but no one expects to learn all the business at a convention. I was confronted with that idea when I prepared my paper on "Pictorial Portraiture," read before your Association two

years ago. It was, and could only be, a mere outline, which those who heard would have to fill in from their own experience. There is no royal road to art knowldge; it has to be studied out with care and patience. It is to be regretted that there has been so much that has been misleading presented to the various conventions. In the short time that can be given to any subject it is impossible to do more than to point the way; those who wish to arrive must go the way themselves; neither theory nor instruction will carry them to their destination.

How, then, can I acquire the requisite instruction, will be asked. There is no better way than to join some art institution and, beginning at the beginning, educate both eye and hand. It will take time, but it will be building a foundation that will be lasting, and it will help you to unlearn many things you have learned to see through the eye of your lens. If there is no art institution that you can attend, get some standard works upon drawing in black and white and practise at home; get plaster casts, one of the head of Apollo, the other of Clytie, study them in every light possible, and I will guarantee that before you have been at it very long you will begin to understand that the human head has no part that can be represented by a flat tint or tone; like a ball or an egg the outside edges recede or fall back, and when you have succeeded in recognizing this fact, you will never again perpetrate the common error of having the ears as prominent as the nose or cheek bone.

There are books that treat of art matters from a photographic standpoint, but none have gone so thoroughly into the matter as Professor Beck's *Art Principles in Portrait Photography*. I can heartily recommend it to those photographers who have ambitions to become something more than the usual thing. It is a very advanced work, and to those who can see nothing wanting in a clear, sharply focussed photograph, there is that in it that he will probably be inclined to term "freakish," but to the tyro with ambitions the book is full of meat. It is quite original in style and methods.

I suppose that upon the same principle that a man thinks his friend is a mighty clever fellow because he agrees with him, so I appreciate this book so highly because it is upon the same lines that I have endeavored to convey in my writings in the journals, both in this country and in England, but in a far more clear and practical manner. The chapter on background is one that meets my ideas, although I have gone about getting the effects by other means. Mr. Beck uses a reducer to give shadow, and an oil mixture on the glass side of the negative for lights. I use the reducer in the same manner, but I use tracing-paper, pencil, and crayton sauce for putting in lights; but both have the same end, viz., to make a background that shall be in harmony with the portrait. Each one has his own way of doing this.

Some years ago there was a man in Philadelphia who made some very artistic portraits with individual backgrounds. He used a scraper for the shadows and smoked the back of the negative over a kerosene lamp—smoking the negative three or four times, and manipulating the smoke deposit with sticks of various shapes—the different smokings acting as the various bitings of an etching, only reversed.

Some years ago, in Wisconsin, I saw another method used for the same end. The figure was taken upon a black background which gave clear glass in the negative; then the negative was worked on both the glass and plain side with an air-brush. But the work can only be attempted by those who have

acquired a knowledge of what is required through an art training, and I have noticed one thing, that as the operator gets expert so that he works with ease and certainty, he overdoes it and puts too much in the background. Simplicity is the last quality an artist acquires.

Now I think I hear some of you say that that is not photography. No, certainly not. Have I not pointed out that photography alone will not be able to demand from the public either increased consideration or increased prices? But in answer to this let me quote the author of the book, Mr. Otto Walter Beck, who says: "Art being a growth, we must consider whether with the young it is not a natural growth, while in the case of the mature photographer it may mean that he should throw aside his preconceived ideas and his prejudices against the phases and possibilities into which he has not yet penetrated. Certain views held by a portion of the profession are harmful to development—subject and lighting, lens and paper, are only means to an end—the profession must seek to avoid weakening its forward movement by controversies of this kind."

In other words, the demand for pure photography (whatever that means) will never raise the profession above the mechanical and scientific, and if we wish to show individuality, to put ourselves into our work, we must not be fettered or tied down to the limitations of lens and chemicals. Whatever will improve the pictorial value of the work must be accepted as legitimate. And to know what to do in this direction cannot come from one or two convention papers or lectures, but must be the study of a lifetime.

We have had in the past, too much of fragmentary teaching which, because it was fragmentary, was misleading. The emphasizing of one particular principle of lighting a face led to its being considered for the space of two or three convention years, as the only system of lighting, and we have had the glittering high lights repeated in almost every exhibit, and it was carried to such lengths that I heard one photographer at one of the conventions gravely telling another that he used glycerine upon the temple, cheekbone, nose, and chin, for the express purpose of getting those strong, glittering high lights. Now this result was quite unexpected, and was certainly not intended by Mr. James Inglis when he published his *Artistic Lighting*. The principle he had in view is one that every art student has to learn when he reaches the stage of drawing from the round, viz., that in a round object there are no flat tints; that the human head is like a ball or an egg—the edge receding—therefore, to light a head so that the ears appear as prominent as the temple or cheek bone, is wrong. There has been a tardy recognition of this fact, and some photographers have tried to remedy the defect by sunning down the edges of the face, leaving the centre of the face between the portions sunned down out of harmony altogether. In some cases this has been done so clumsily that the face looked as if it had been very dirty, and a wet towel having been applied to the centre of the face, the dirt had been wiped from that part only.

But, certainly, of all the sins photographers have to answer for, the neglect of the background has perhaps been the worst. I have written briefly upon this matter in your program, and I can only supplement this by calling attention to the very excellent chapters on the background in Mr. Beck's book. These chapters are illustrated by photographs showing the improvements made by his method of working. I suppose the background

painters will not appreciate the idea of the photographer using plain screens and working in each background to suit the sitter. But if the photographer wishes to produce photographs that will be worthy of the name, and lift both his business and himself above the level of the mechanic with the clock, the thermometer, and the tank, he must become an art student. And I contend that this is a far more important business proposition than the conduct of the operating room, reception room, or any other part of the business, for although some may make a success from the point of view of the dollar mark, the greater success can only come by the elevation of the photographic portrait into the realm of art, by individual manipulations in artistic hands, and that this brings dollars and cents is proved in many instances that I know of personally.

HINTS ON STUDIO CONSTRUCTION.

[To the photographers in the smaller cities the building of a studio is a matter of much concern owing to the lack of opportunity of seeing a variety of new models. The following hints given by Mr. Wm. Michell in the *British Journal of Photography* will be useful to the photographer contemplating a new studio.—Ed. W. P. M.]

Judging from some of the queries and from advertisements of businesses for sale, in which a studio with a north light is made a feature of, it would seem that the idea is somewhat prevalent with many that it is only in the studio with a north light that good pictures can be taken. If that is the case, no greater fallacy exists. The only advantage I can conceive in a studio with a north aspect is that the light is generally more uniform throughout the day than in any other. For that reason inexperienced or unskilful workers may be enabled to produce better results than they would otherwise do. With a northern aspect also the sun gives less trouble than with others, but experienced hands know quite well how to deal with that as circumstances arise. I have even heard of very eligible premises, as regards business, being rejected for others in a far less suitable place, merely because a studio with a north light could not be erected there.

The aspect of the studio is quite of secondary importance as compared with the business position. The excellence of the work depends entirely upon the photographer who works it. During my quarter of a century in portrait photography, a good part of which was in the collodion days, I have worked in studios with aspects of nearly all the points of the compass, except the north. I never had the experience of working with a north light. The nearest approach to it has been northeast and northwest. Once I worked for a time in one with a due south light, and I may say that, among what I consider the best pictures I have produced, were those taken in the south-lit studio. The light was very variable, it is true, but that is of little moment to anyone who understands his business.

Studio Types.—En passant, I may remark that the late Mr. Valentine Blanchard, as well as the late Mr. Adam Salomon, whose portraits created such a *furore* for the effects in their lighting about the early seventies, preferred a south light to work in, and had their studios constructed with a south aspect. One of the advantages of a

south light is the great variety in lighting that can be obtained with more ease than in many others. The light also is stronger, and enables shorter exposures to be given—no mean advantage in winter. Incidentally, it may be mentioned how the studio above referred to in which I worked was built. It was of the lean-to form. The side light, which was fairly high, was glazed with ground glass, the roof with plain glass. This was fitted with two sets of blinds, on spring rollers; those next the glass were white and the others black. The side was fitted with black curtains running on rods. With this simple arrangement I obtained pictures with great variety in the lighting, and they gave great satisfaction to the sitters.

For two years my work was done in a studio with an all-top light; there was no light at all below 9 ft. from the floor, yet satisfactory portraits were obtained in it. Fortunately, the studio, or, rather, room was large, and by means of reflectors the top light was, to a great extent, converted into a side one. However, this kind of studio is certainly inconvenient, and is by no means to be recommended if circumstances will permit of any other being constructed. In many instances, as in this, the photographer is restricted to certain aspects, and also by restrictions with regard to the Building Acts, also by the by-laws made by local authorities; so that the best has to be made of the existing circumstances. "The coat must be cut according to the cloth."

The most general forms of studio at the present time are the ridge or span roof and the lean-to, and both are good. The former can usually be lighted from both sides, and the latter, of course, from one side only. Hence with the latter, unless both ends of the studio are used for sitters, all must be lighted on the same side. Hence there is a great sameness in the lighting of the portraits. With the span roof it follows that either side light, provided it is not obscured by other buildings, can be used as occasion may require. Two studios in which I worked for some years were of the ridge-roof form, and ran north and south, so that the sitter, when placed at the south end, could be lighted with either east or a west light, which was a great convenience. In the earlier part of the day, when the west light could be used, there was no trouble with the sun. Neither was there in the latter portion, when the east light could be employed. Such studios are very convenient to work in, but space and surrounding conditions are not always available.

The Lean-to Studio.—A very favorite form of studio at the present time is the lean-to form, and, on the whole, if both ends are utilized for the sitter, it is the one to be preferred. For general work it is desirable that its length should not be less than 25 ft. to 30 ft., and its width about 13 ft. or 14 ft. This will permit moderately large groups to be taken and lenses of fairly long focus being employed, so that good perspective is obtained in the pictures. With short studios the sitters have to be placed very close to the background, and, as a consequence, there is no atmosphere between them. Hence the sitter looks much as if he were stuck on to the background, or even let into it. Short studios also necessitate the use of short-focus lenses, so that the perspective becomes violent and the pictures convey the idea of distortion. Most of those who take large heads, where the lens has to be placed 6 ft. or 7 ft. from the sitter, find that this class of picture, as a rule, does not give the same satisfaction as do smaller ones taken at a greater distance.

The Proportions of Glazing.—Here are good proportions for a studio for general work, whether of the lean-to or ridge form. It may be well to say here that it is undesirable to have more glass

than is really necessary, as it tends to make the studio unduly hot in summer and unnecessarily cold in winter. We will consider one, say, 27 ft. long and 14 ft. wide; 6 ft. of the roof at either end and 4 ft. at the sides may be opaque, or solid. The wider the studio the more at the ends may be made opaque, and the narrower, the less. The height from the floor to the eaves may be 8 ft. 6 in. to 10 ft. from the floor, inclusive of about 3 ft. of skirting next the floor. This may be glazed with plain glass, or, if the studio is much overlooked, with fluted glass, as that does not obstruct the light and yet cannot be seen through. The height from the eaves to the ridge may be about 6 ft., and that will give a good slope to quickly carry off rain, and thus help in preventing the water finding its way through. A very suitable glass for the roof is what is known as rolled plate. It is thick, obstructs but little light, and is not likely to be damaged by hailstorms. The glass need not be carried up to the ridge by a couple or three feet, as then the roof can the more easily be made, and kept, watertight. Also, the blinds or curtains, whichever are used, can the more easily be fixed so as to exclude light.

The framework of the building is best of iron, as that is not affected by the weather in the same way that wood is, and for that reason the roof can the better be kept in a watertight condition. One other point should be kept in mind in designing a studio—namely, its ventilation. Ventilators, that can be opened and closed as required, should be placed in the highest part of the studio, and it is also a good plan to have others at the lowest portion, so that a cool current of air can be admitted at the bottom and the heated air pass out at the top of the studio.

HOW I MAKE MY BEST OZOBROMES.

BY THOMAS MANLY.

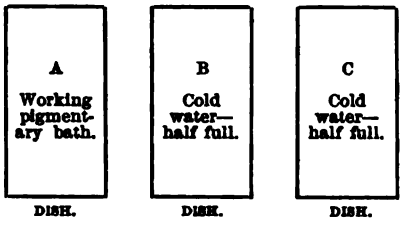
I HAVE six 12 by 10 bromide enlargements from which I want to make ozobrome transfers. They must be finished this evening, as the receiving day for the exhibition is early next week, and there are the frames to consider and get made.

I seldom make ozobromes by No. 1 method now, as I think the transfer method, No. 2, is much superior in many respects, the results being pure carbon pictures without admixture of silver, and I save my bromide print for further copies.

The bromide prints have all been fixed in the chrome-alum fixing bath and thoroughly washed, and the quality varies. Nos. 1, 2, 3, and 4 are normal—that is, they require no alteration in the gradation to produce good results. No. 5 has rather dark shadows and clear high lights—in fact, too contrasty. No. 6 shows overexposure in enlarging. It is slightly veiled, and the shadows are a trifle weak. Nos. 1 to 4 require treatment with the normal pigmenting bath. No. 5 requires an addition of alum to the normal bath. No. 6 an addition of citrate solution to the normal bath, the formula for which is: Water, 100 parts; boric acid, 3 parts; citrate of potass., 2½ parts.

I take 8 oz. of the concentrated ozobrome pigmenting solution and add 32 oz. of water, making 40 oz. of diluted solution. I place three porcelain dishes

alongside one another, and will call them A, B, C, thus:



Into A I pour the diluted pigmenting solution or working bath. B and C I half-fill with clean, cold water. I now only want a soft sponge, a camel's-hair mop brush, two sheets of plate-glass, a flat squeegee, developing .tank, and thermometer to complete my outfit.

It is now seven o'clock and I am ready to commence operations.

I first place the bromide print in the dish of cold water C, and pass the sponge lightly over the surface to remove airbells. I then take the piece of pigment plaster, the color I require, and cut a little larger than the bromide print. This I slide into the same dish, C, and lightly pass the soft sponge over the gelatine surface, being careful not to allow the plaster to remain in the water longer than half a minute (thirty seconds) at most. I now remove it from the water and allow it to drain while holding it by a corner. I then gently slide it into the working bath contained in dish A, keeping it under the surface with a soft mop brush and rocking the dish to ensure even soaking. I let it remain in the solution between one and a half and two minutes. At the expiration of this time I lift it out of the solution by a corner and allow it to drain, removing any adhering airbells with the brush. I now draw it face downward across the surface of the water contained in dish B, and in bringing it out I drag the gelatine film over the edge of the dish. I then transfer it to dish C, where the bromide print is lying, and lay it carefully, face downward, upon the surface of the water, avoiding airbells by first allowing one edge of the plaster to touch the water and gently lowering the the remainder. I then pick up the two corners of the underlying bromide print and bring them into contact with the two corresponding corners of overlying plaster, and, holding the papers firmly together, I gently draw them, clinging together, out of the water; then, adjusting the adhering papers quickly, so that the plaster shows a margin all round the bromide print, I place them upon a sheet of plate-glass (plaster uppermost), and squeegee them into contact with a flat squeegee, first very gently, then increasing in force, but never pressing roughly.

I now make a note of the time on a corner of the plaster backing with a soft Conté pencil, and, lifting the underlying paper with the blade of a palette-knife, I place the adhering papers between blotting-paper, under a slight pressure. The bromide prints, Nos. 2, 3, and 4, being of the same character are treated in the same way.

N. B.—After each operation the water in dish C must be changed. There is no necessity to change the water in dish B.

No. 5 is a rather hard bromide print, and I want to make a soft ozobrome from it. I therefore add a small quantity of 5 per cent. solution of ordinary alum to the working bath. I generally add 1 dram of the 5 per cent. alum solution to every 20 oz. of the working bath, after using for six 12 by 10 prints, to keep it in order; but as this is a case of directly altering the gradation, having already used the bath for four prints, I will add 2 drams of the alum solution to each 20 oz., making 4 drams for the 40 oz. of working bath. The manipulation is exactly the same as described for Nos. 1 to 4.

No. 6 bromide print is slightly veiled;

the bath therefore requires the addition of the citrate solution mentioned above. It is obvious that if you have made up a bath that gives soft results you will have to neutralize the softness-producing property before you can make it into a bath giving contrast. This can be done by adding as much citrate solution as the extra alum you have added; but it is scarcely to be recommended in practice, especially when it is done more than once. It is better to add the citrate to a fresh bath, and keep the solution specially for veiled and foggy prints. About 30 to 40 minims of the citrate solution added to 20 oz. of working bath will generally be found sufficient. I must bear in mind that these pictures are for exhibition, therefore, I will make up a fresh working bath, and as the overexposure is only slight, I will add 1 dram of citrate solution to 40 oz., and keep the bath for future overexposed prints.

It is now half-past seven o'clock, and the squeegeed print I first placed between blotting-paper is quite ready for transferring, fifteen minutes being the usual time, but a little longer time does not matter. I have already selected what transfer papers I want, namely: Three of B quality (medium grain), one of C quality (white etching), two of D quality (toned etching). I change the water in dish C and slide a piece of transfer paper under the surface, wiping it gently with the sponge to remove airbells. I allow the paper to remain in the water for one minute. I now take the first squeegeed print from between the blotting-paper and transfer it to dish B, and at once separate the two papers by taking hold of a corner of the plaster and pulling it away from the print. I keep hold of the plaster by a corner (leaving the bleached print remaining in the dish), and pass the thumb of my disengaged hand over the four edges to remove airbells, which are most likely to be formed at the edges where the bromide print was attached to the plaster. I now transfer the impressed plaster to dish C and lay it gently on the surface of the water (one edge first, and lowering the remainder gradually to avoid airbells). I then lift the underlying transfer paper and bring it into contact with the plaster under the water and draw the two papers out, clinging together, in the same manner as I manipulated the bromide print and the plaster in the first operation. I allow the adhering papers to drain, and then squeegee them together (plaster uppermost) on the sheet of plate-glass, using the squeegee very gently at first, then increasing in pressure. I now place them between blotting-paper under a fair pressure, such as a sheet of thick plate-glass. I find the rough transfer papers do not require longer soaking than smooth ones; but in no case should the plaster be supersaturated with water. All my other prints I treat exactly in the same manner.

It is now 7.50 o'clock, and the first transferred print has been under pressure for twenty minutes (fifteen minutes is the usual time, but a little longer does not matter). I began heating my developing water as soon as I made my first transfer, and it is now 104° F., a good temperature to begin with. I take my first transfer from between the blotting-paper and place it under the surface of the warm water. In a few seconds the pigmented gelatine begins to exude along the edges, and it is time to remove the plaster backing. This operation is much easier than in ordinary cabon printing; in fact, there is never any difficulty. Do not be alarmed if you see that the pigmented gelatine has run into light, circular patches; it only denotes the softness of the unacted-upon gelatine, which is very easily dissolved away in this pro-

cess. I usually remove the soluble gelatine by keeping the picture face downward on the surface of the warm water and moving it backward and forward so as to produce friction between the water and the gelatine.

In about a minute I turn the picture face upward, and see how the development is going on. Ozobrome pictures develop very easily up to a certain point. With a new bath, this point is as far as the development should be carried; but when an excess of alum has been added, hotter water and longer development will be required to produce the same effect. An excess of citrate solution will have the opposite effect, and the developing water should be cooler. I always finish the development by dipping the pictures in cold water for a few minutes.

It is now half-past eight o'clock, and I have my six ozobrome pictures hanging on a line to dry. I will now turn my attention to the six bleached bromide prints lying in dish B. They require fifteen minutes' washing in running water before re-development, and as I have not much time tonight I will wash them and hang them up for development tomorrow. During the washing of the bromide prints I pour back in the respective bottles the working baths I have used. The first solution, which was used for five prints, and to which alum was added, is cloudy and requires filtering. The second solution, containing the citrate, is perfectly clear. I will conquer my intense desire to closely examine the finished ozobromes till tomorrow morning, as I know to my cost how easily damaged they are when in a wet condition.

Next Morning.—The pictures are A1; not a single airbell on any of them. No. 5 might have had a little more alum added to the bath; but then the judges have not the negative or bromide in the mind's eye as I have, and it may pass. The frames will be the subject of tonight's dreams.—*Amateur Photographer.*

SECOND NEW YORK ARISTO SCHOOL OF PHOTOGRAPHY.

THE Second New York Aristo School of Photography was held in the building of George Murphy, Inc., September 10, 11, and 12, in the daytime from 9.30 A.M. to 5 P.M. each day, and on the evenings of September 10 and 11, from 7.30 P.M. to 10 P.M. The school was well attended, every minute of the time being taken up with demonstrations.

A comprehensive program, including lighting, posing, negative developing, operating under Aristo lamp, printing with Aristo lamp. Ozobrome and bromide demonstrations were carried out.

The school was managed by Messrs. Frank Haslett, F. L. Cornell, F. Becker, John J. Montgomery, Joseph Weaver, with assistance from time to time of others.

The ozobrome process created great interest and the demonstrations were satisfactory in every way and without doubt the new process has had a great start.

Lighting and posing under the Aristo lamp, the negatives from sitters were practical and appreciated by all, as each morning proofs were exhibited from the negatives made the preceding day and evening. Negative values were shown and explained, and it was fully demonstrated that the work of the Aristo lamp shown would be fully equal to all representation, and its use for studio work during dull days was one that photogra-

phers could not afford to do without in their equipment.

The paper demonstrations were carried out in every detail, and questions were solicited and asked for and practical results clearly shown. This was managed by Mr. Frank Hazlett. Mr. Fred. Becker gave demonstrations and talks each day on printing devices and practical methods. This was thoroughly appreciated.

Mr. Cornell's work under the Aristo lamp attracted earnest attention and a large number of sittings were made of professional photographers, who gladly appreciated negatives of themselves made by one of their profession. The lighting of the subjects under the lamp was fully covered and Mr. Cornell's work was appreciated by all.

The school was a success and we hope to have another in a few months with added processes, and all visitors seemed to feel by their attention and also by their expressions a full appreciation of the second school.

The Ross studio lens was used by Mr. Cornell in making sittings and the resulting negatives are a splendid showing of the work done by the celebrated 3A Ross portrait lens.

Aside from the school, we exhibited on our sales floor a complete line of backgrounds and accessories, the Percy King light controller, the Eagle flash lamp and Eagle vignetter, the Eagle electric developing and printing lamp, the Eagle adjustable tank, etc.

The Second New York Aristo School of Photography had left its impression upon all, and we predict that the next school exhibition will tax our building to its utmost. Over seven hundred entered the school during the three days and two nights. We regret that all were not registered, as owing to the crowd at times the registering of all was overlooked; but we are pleased to note that over three hundred and fifty of the names were recorded.

Yours truly,

GEORGE MURPHY, Inc.

CONTROLLING TONE OF IRIS DEVELOPING PAPER.

TONE is easily controlled after becoming familiar with the general principles of the process. The tone of prints as they leave the fixing bath should be decidedly olive.

Bromide of potash is important in controlling tone, and at least as much as is recommended in the formula should be used. Be sure that it is a saturated solution and not a 10 per cent. solution. It is impossible to state a given amount of bromide as sufficient for producing the same results in different parts of the country on account of water conditions, etc. If the amount of bromide given in the formula does not produce prints that are olive, it may be slightly increased without harm. It is not advisable to use too much, as an excess of bromide destroys the soft gradation of the paper. If it is found that the slight increase of bromide does not make prints olive, it will be advisable to add one drop of nitric acid to each ounce of developer.

Exposure and development are also responsible for producing a variation in tone. For instance, a print that is fully timed, so that development takes place freely, will be olive in tone as compared to a print that is under-timed and forced in development, although the same developer is used for both prints.

To obtain rich, brilliant prints of proper tone they should reach the desired depth without forcing the development. This is regulated by proper exposure.

The paper possesses considerable latitude of exposure, and extreme over-exposure, also extreme under-exposure, should be avoided. Over-exposure and quick development will increase the contrast of the paper and destroy the detail in the shadows. Under-exposure and forced development will cause prints to be flat and weak, cold in tone, and lacking detail in the high lights.

After Iris prints are fixed, they may be rinsed and toned as directed. Do not over-tone. Tone only enough to remove the decided olive color. Over-toning will cause prints to be cold in tone.

TRADE NOTES.

Enlarging with the Lantern is the title of a new booklet just issued by Burke & James, of Chicago. It gives a quantity of useful and practical information on the making of enlargements and the management of stereopticons. Will be mailed free upon request. The "Ingento" and "Ideal" lanterns and stereopticons, manufactured by Burke & James, are well known for their many good features and are without an equal in the market. The season for enlarging and stereopticon work is at hand, and photographers interested should send for the booklet.

DALLMEYER PORTRAIT LENSES and COOKE ANASTIGMATS are very much to the front in the optical world. The American agents, Taylor, Taylor & Hobson, New York, claim that there are more Dallmeyer portrait lenses in use in the best American studios at the present time than all other makes of portrait lenses combined. This is a very strong claim, but with our knowledge of the American studio we know it is well within the mark. It is a standing testimonial to the reputation gained by these lenses during the past fifty years.

The Cooke anastigmat, though comparatively new to this country, has, during the past four years, made for itself a reputation that is little short of phenomenal, and there are no more enthusiastic photographers than those who have this popular anastigmat on their camera, and their number is legion and growing steadily.

THE PREMO FILM-PACK has been adopted officially by the United States Government and is to be used exclusively by the army and navy authorities to photograph every enlisted man as he enters the service, for identification purposes. The many unique features of the film-pack secured for it this striking tribute. Its easy operation, certainty of results, adaptability to various cameras, portability, and compactness for filing purposes make it an ideal system for standardized records on a large scale.

FIRST in every class at the Boston Convention is the proud boast made by the Eastman Company for their Angelo Sepia Platinum Paper. Every first prize, including the Grand Portrait Gold Medal, was awarded to prints made on this paper. This is the strongest kind of endorsement and needs no further emphasis on our part. We congratulate the Eastman Company on such a sweeping success.

"AGFA" FIXING SALTS are a sure antidote for warm-weather troubles with the fixing bath. We have used this bath during the past warm weather and had no trouble from softening of the film. It has the further advantage of fixing rapidly and the duration of fixing does not materially increase as the bath becomes exhausted. It is another "Agfa" success and should be tried. Ask your dealer about it.

OZOBROME—the new process for making carbon prints without the direct action of light—has been creating considerable interest at the recent conventions and Aristo schools. The Eastman Kodak Co., sole licensees for America, announce that the materials for the process are now ready. They have a description booklet which they will be glad to mail on request. The advantages of ozobrome are many and far-reaching, a few of which are: The worker is independent of any light for printing; a non-reversible image, doing away with the double transfer; the sensitive material is either bromide or velox; carbon enlargements can be made from bromide or velox enlargements, doing away with the trouble and expense of making enlarged negatives, etc. There are other advantages, but we have mentioned enough to satisfy the photographer that it is a process well worth trying.

EDITOR'S TABLE.

OUR illustrations this month are of unusual interest in that we are able to reproduce eight of Herr R. Dührkoop's characteristic portraits, comprising studio, home, and outdoor portraiture. Second only to his wonderful skill as a photographer is his generosity and his desire to be helpful to the fraternity. Replying to our request for permission to reproduce his pictures, he writes: "I have seen and learned much in America, and the excellent American photographers have treated me so heartily that it is always a great pleasure to show my pictures on your side."

Herr Dührkoop's letter-paper prints a long list of gold medals and other honors awarded him in Great Britain, Italy, Spain, and Germany, and as showing his high regard for this country we note that the first position in this list of honors is given to the announcement that he is an honorary member of the Photographers' Association of America.

Our frontispiece is a reproduction of Garo's "Portrait of Miss T." The spectacular picture of the Boston Convention, it was the subject of much praise and some criticism. The print was made on sepia-toned Artura paper, and we are indebted to the Artura Photo Paper Co. for the loan of the magnificient halftone from which our frontispiece was printed. This picture has a further interest in that it secured to Garo the possession of the Goerz Trophy, which, having been won by him three years in succession, now becomes his property without further contest.

THE first prize in the portrait class at the New England Convention was won by E. C. Doty, of Belding, Mich., with a print made on Angelo sepia platinum, as were all other first prizes awarded at the Convention. We hope to reproduce Mr. Doty's prize picture in an early issue of the magazine.

Art and the Camera. By Anthony Guest. 159 pp., profusely illustrated. London: Bell and Sons. New York: The Macmillan Company. $2.00, net; postage, 20 cents.

Mr. Anthony Guest, a writer somewhat new to the American reader, presents in *Art and the Camera* a series of forty-seven essays on photography which can be read with much pleasure and considerable profit. While of special interest to the pictorial photographer, the essays on Hands, Study of Values, Composition, Balance and Portraiture make the book well worth the professional photographer's attention. It is a book to be read in leisure moments, being inspirational rather than practical. The fifty full-page illustrations reproduce some of the work of the leading pictorialists, and, while many of them have suffered in the reproduction, they add considerably to the interest of the book.

The Photo-Miniature, No. 81, Sept., 1907, on "Ozobrome Printing," is very timely. It is not merely a description of the process; it gives full working instructions carefully revised from the latest advices of its inventor, Mr. Thos. Manly. Mr. G. Hanmer Croughton's experiences are also detailed. Coincident with the Eastman Company's announcement that the paper is ready this number of *The Photo-Miniature* will be of special interest to the photographer.

MESSRS. Falk, Core, and Newman, active members of the Metropolitan Section of the P. P. S. of N. Y., have just evolved and patented an ingenious little print-meter, well named "the print-saver." Little larger than an ordinary domino, it is fastened to the top of the printing frame, and after the proper tint for a negative has been arrived at, numberless perfect prints can be made by inexperienced helpers without wasting any paper. No printing frame will be complete without one, and the amount of paper saved will be considerable. We understand that it will be placed on the market at an early date and at a popular price.

THE Photo-Secession announces through Mr. Alfred Stieglitz that the third series of exhibitions will be held at the Little Galleries, opening in November with an exhibition of work by members of the Photo-Secession. This will be followed by others at intervals during the winter and will include exhibition of foreign and domestic pictures —not always photographic.

UNCLE JOE BYRON, Broadway's flashlight specialist, has just returned to "The Great White Way" after visiting his son, Percy Byron, who is running a successful commerical and photo-engraving plant in Edmon, Alberta.

PIRIE MACDONALD is having some new experiences while getting his new Fifth Avenue studio ready. He has discovered that "New York hustle" is only a catch phrase used by the fiction magazines, and that an ordinary three-hour delivery of a piece of apparatus generally means three weeks in the "busy metropolis." We hope his troubles are over and that things are running smoothly when this appears.

Home Portrait by Janvier, Baltimore, Md.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV NOVEMBER, 1907 No. 611

THE NATIONAL CONVENTION.

BELOW we print an invitation to the photographic fraternity, by President-elect Medlar, which we commend to the special attention of all photographers who are interested in the welfare of the Photographers' Association of America.

Without going into the merits or demerits of the Dayton Convention, it must be conceded that in spite of the great amount of hard work by the officers, from the President down, the Dayton Convention was not a very great success. Something more than a hard-working and intelligent executive is needed if a National Convention is to achieve the greatest good. Behind the President and his executive there must be an enthusiastic membership which is more than anxious to do its share toward advancing professional photography through the P. A. of A.

The giant "Lusitania" does not speed from port to port merely at the whim of its commander. He acts under instructions from a board of directors, who in turn are formulating the wishes of the body of stockholders, who have banded themselves together for a specific purpose. The President and officers of the P. A. of A. are elected to carry on the detail work of the Association, to formulate and carry out the wishes of its members. Unless the members of an association bestir themselves and take an active interest in its affairs, decay and dissolution will naturally follow.

President-elect Medlar asks for the coöperation of every member of the Association. He asks for an expression of your views. Think it over and then tell him how you would run the convention if you had been elected president. The election to the presidency does not carry with it an endowment of gray-matter. The retiring president does not hand over to his successor a complete outfit of new and original ideas on the successful carrying through of a convention.

It is for each member to come out with his ideas of what would be good for himself and good for the fraternity. It is absurd to expect one man to step into office and evolve a convention that will give all-round satisfaction.

Special attention is directed to the prize question. The last convention decided that prizes were to be offered at the Detroit Convention. Just how the awards are to be made is a question

that should interest every photographer. Every man has his ideas as to how he would offer, judge, and award prizes. Let him put his ideas on to paper and submit them to the executive board. The man whose scheme is adopted will win a twenty-five dollar prize, which will not come amiss even if he has done the work purely out of interest in the question.

Think the matter over and then see if you cannot help Mr. Medlar to make the 1908 convention an unqualified success.

TO THE PHOTOGRAPHIC FRATERNITY.

As the time soon arrives for my taking up the reins of office as President of the Photographers' Association of America, I wish to impress upon you that my every endeavor will be to carry out the will of the majority. I do not feel that the policy of my administration should be one of individual preference entirely, but a comingling of the ideas of the entire Association, and to formulate a policy which will be of most benefit to the Association as a whole, I invite you to give expression, either through the journals or by private correspondence, to any opinions or ideas you may have as to the policy to be carried out at the 1908 Convention at Detroit.

The individualism of this Association is the true mark of its strength and usefulness, and unless we can better get the expression of the individual on the policies you wish your Board to pursue there can be no real advancement either in association, artistic, or commercial lines. I wish to urge upon you the necessity of giving this your attention, as no Board composed of five men or more, however willing and faithful, can plan in the short time they are brought together, a convention that will be free from criticism and give the same measure of satisfaction to all.

It is for this reason, and to give the members an equal chance to be heard, that I am inviting the open expression of the ideas from the mass of our national membership, and hope you will feel no restraint in handling this subject as it appeals to you.

In this connection I wish to call your attention to a resolution adopted at the Dayton Convention "that $25.00 be awarded for the best article written on the Prize Question, all articles to be submitted to the Board at its annual meeting in January, the prize article to be published in the Association *Review* of 1908."

This is a question that should not be lost sight of. As your Association now stands committed for prizes, the nature and number of which, as well as the method of making these awards, being in the hands of your officers, I would urge all who have given this matter thought, or have a system to offer, to use this means of bringing their ideas before the Board and the Association.

The only restriction I feel I must impose is that these articles be in my hands not later than January 1, 1908.

I wish to assure you that my every effort the coming year will be to give you a meeting the success of which there can be no question.

Fraternally,

FRANK W. MEDLAR,
President-elect P. A. of A.

EXHIBITION OF "AUTOCHROME" PHOTOGRAPHS.

BY THE ASSOCIATE EDITOR.

SOME few days ago we had the pleasure of seeing an exhibition of autochrome photographs made by Stieglitz, Steichen and Eugene, and shown at the Little Galleries by Mr. Stieglitz. These magnificient photographs have only to be seen to realize that real color photography has arrived. No description can give an adequate idea of the beauty of these colored transparencies. All colors are faithfully reproduced with the exception of the lemon-yellow. Whites and grays are faithfully rendered and the flesh tints are perfectly natural.

The photographs shown included portraits of Mrs. Kasebier, Frank Eugene, and Alfred Stieglitz; they were almost startling in their reality—almost uncanny in their exactness of reproduction.

The new process seems to be able to equal any color combination, some of the plates shown being masses of the most brilliantly colored flowers all rendered with a fidelity to nature that will have to be seen to be believed.

The process opens up an immense field of possibilities to the professional photographer even in its present position—that of a colored transparency seen by transmitted light. There is no comparison between the monotone print and the warmth and beauty of the picture in actual colors, and the photographers catering to the wealthier class of sitters will have little difficulty in selling, at a high figure, an autochrome photograph made at the time of the regular sitting.

The new plates and accessories will shortly be on sale by the Lumière N. A. Co., New York. Orders for early delivery should be placed now. Elsewhere we give the experience of Mr. Montminy, of Quebec, who made the first autochrome photographs on this continent, and Mr. B. J. Falk, of New York, who has experimented with every known color process in his search for real color photography adaptable to every-day studio portraiture.

We would like to make a strong protest against some remarks made by Mr. Alfred Stieglitz, at the Press view of the autochrome photographs and printed in the *New York Times*, of September 30. He remarks: "I knew this thing was astounding. I wanted Americans to see these plates handled in a way that would not kill them from the very first. *I knew that if some of the professional photographers got a first chance at them and exhibited their work they would be eternally damned from the start.*" In one breath the whole photographic fraternity of America are branded as incompetents and the announcement made that Stieglitz, Steichen, and Eugene are the only three Americans (?) who can make autochrome photographs.

Mr. Stieglitz was perhaps not aware that he was not the only person who was able to purchase the plates in Paris. As early as the latter part of June one of the professional photographers of Quebec had brought plates into this country and made some very satisfactory portraits. Mr. Stieglitz arrived three months later with his examples and with characteristic modesty laid claim to being one of the three and only autochromists.

Out of the hundred odd lines which the *Times* devoted to the subject three lines were devoted to mentioning the

fact that the Lumières had spent fourteen years experimenting before the plate was perfected, the rest being devoted to how Stieglitz "worked like mad;" how he "went to Germany and started to work," it evidently being impossible to do any work in France, and how he "wanted Americans to see his work first," lest the process should meet the fate of the unbaptized infants.

We do not for a moment begrudge Stieglitz, Steichen, and Eugene all praise and credit for the splendid work they have done with the autochrome plate. Their results are magnificent and may possibly not be excelled, but the assumption that no other photographers are fit to handle the process is too absurd to pass unchallanged. Mr. Stieglitz should remember that history occasionally repeats itself. The Daguerreotype, after its introduction into this country from France, was brought to perfection by American professional photographers and that, strange to say, before Stieglitz was born.

THE AUTOCHROME PROCESS—A NEW ERA.

BY B. J. FALK.

[MR. B. J. FALK believes that the photographic studio will not be complete until it can make portraits in real color. He has experimented with every known color discovery along photographic lines. With characteristic foresight he made inquiries about the Lumière autochrome process when it was first announced two years ago, with the result that he has the distinction of having exposed the first batch of the new plates in New York. We have pleasure in giving below his experiences with the plates. Mr. Falk has great hopes for their future. We have seen the transparencies and quite share Mr. Falk's hopes. The fourth plate exposed was an almost perfect rendering of a group of various colored objects, the only defects being due to slight imperfections in the film.—ED. W. P. M.]

Genuine color photography has to most of us always seemed an impossible dream. Some of us have felt that it was bound to come sooner or later, especially after the startling discovery by Röntgen of the *x*-ray—a discovery so revolutionary that it made *everything* seem possible—but even then few of us ever expected to live long enough to see it accomplished.

Direct color photography is a *fact* and the name of Lumière, conspicuous as it has been for many years, has become illustrious alongside of that of the other Frenchman, Daguerre.

The Lumière autochrome plate is the first one which yields a picture in the colors of nature, with one exposure and without any printing or transfer. The colors are wonderfully true. The plate exposed in the camera is the plate on which the finished picture appears.

From the published descriptions which tell how this plate is prepared, it strikes me as a most wonderful and yet simple evolution of the McDonough process, which was published about twelve years ago. In that process a separate color-screen was placed immediately in front of the sensitive plate at the time of exposure; from the resulting negative a glass positive was then made by contact; and the image on this positive, which looked like any other black-and-white transparency, immediately appeared in all the colors of nature

when you held against it the same, or a similar, color-screen as that used in making the negative.

To me the wonderful ingenuity of the Lumière method lies in the fact that the color-screen, the negative, and the positive have all been combined in *one and the same plate.* Therefore, instead of several operations and several plates, there is but one operation, one plate. It is all as simple as the trick with Columbus' egg, after someone has shown you how to do it.

I ordered some of the plates from Paris last July, but received only a few of them toward the latter part of September. The demand for them far exceeds the present manufacturing capacity, and I fear it may be months before we will be able to secure them over here, in sufficient quantities to give them the extensive experimental study that so great an innovation in our profession demands.

With the few plates thus far at my disposal, I am, of course, unable to say much about their working qualities. Full directions accompany the plates and have also been printed in some of the magazines; the following additional points, however, seem to me important and I jot them down for what they are worth:

1. The exposure must be exactly correct. Either over-exposure or under-exposure will change the color values. In the former case the lighter color ones are lost; in the latter there is a lack of color as well as detail in the shadows.

2. Being thinly coated these plates seem to be best suited for subjects which are lit without extreme contrasts, otherwise the length of exposure necessary to secure good color in the shadows will develop up the lighter half-tones into the highlights, making them appear a dirty gray.

3. Temperature of all developing solutions should be about 65° F., but not higher, so as to avoid frilling. Judging by our experiments here, the development of the positive (after the negative image has been dissolved) should be very complete. The printed directions call for from two or three minutes for this purpose, but I have found that four minutes or even more will be safer, so that the image will not lose density or fix out in the hypo.

4. In strengthening it seems better to over-do a little rather than the reverse, as the colors look much more brilliant by contrast.

5. After fixing a fresh solution of alum should be used to harden the film, which is extremely soft and delicate.

In the few experiments to which I was limited I found the plates, when used with the requisite yellow filter, exceedingly slow for portrait work, requiring an exposure about sixty times as long as that necessary for a Seed 27 (or about a minute for every second). I also found that the plates were poorly coated, nearly all of mine being imperfect by reason of spots and blotches due, no doubt, to newness and stress of manufacture. At the present time, however, these things are a mere bagatelle. Mechanical perfection does not come in a day. The great point is that ground has been broken for hitherto unknown and brilliant achievements in photography. From now on all kinds of improvements are sure to come thick and fast. The time of exposure will be materially shortened (I am myself working on a method for doing this which I hope to report on shortly) and ways will be discovered to secure these pictures not only on glass but on paper as well. In the meantime, as usual, other processes for direct color work have already been announced. A new era has begun for us all, and I am sure that it will bring us not only increased joy in our work, but also

increased interest on the part of our patrons.

Before concluding I desire to express my sense of the great courtesy of Mr. Alfred Stieglitz, who showed me about twenty-five portrait photographs in color made on the Lumière plate in Europe last summer by himself, Mr. Edward Steichen, and Mr. Frank Eugene. He told me that they experimented with hundreds of plates before securing these examples. The results I saw are certainly wonderful, the flesh tints being especially remarkable.

THE AUTOCHROME PROCESS.

QUEBEC, October 9, 1907.

EDITOR, WILSON'S PHOTOGRAPHIC MAGAZINE.

MR. EDITOR: I read with great interest the article published in your last number concerning Messrs. Lumière's marvellous discovery of natural color photography, and I believe that the experience of a professional photographer with the autochrome plate may be of some interest for your readers.

I happened to be in Paris at the time the Messrs. Lumière made their discovery public and distributed a few of the new plates among the best photographers in that city.

It was on June 10, and I left Paris for home on the 13th; but before leaving I was fortunate enough to get sixteen of these famous plates through the courtesy of Monsieur Chevrier, the firm's head representative in Paris (Messrs. Lumière's establishment is in Lyons).

I landed at Quebec on June 21, and after a few days' rest I began experimenting.

My first exposure was on flowers, fruit, and a few books bound with rich covers of different colors; in each case the colors came out beautifully. I then experimented on portraits. On July 10, I made a beautiful picture of a lady (this was certainly the first photograph in natural colors made on this continent), which I have now framed in my office. It has and is still being admired by a great number of people. The lady's dress is blue and so is the hat with flowers on it, including two nice roses. The lady's complexion and the various shades of color in her dress are perfect.

It was my second plate on portraits, and the exposure lasted one minute. The first one was under-exposed and I found that the greatest difficulty was to time rightly. An under-exposure will give very brilliant colors, but will be lacking of details in the shadows; it will also give a rather dull appearance to the image, while an over-exposure will cut off details in the delicate colors and the whole picture will lack brilliancy.

I lost a few plates by frilling, on account of the very warm weather, and I had to use ice-water during all the different manipulations, otherwise the film would melt in my hands. We were then in the hottest days of the summer and we would not have the same trouble now. As you will see, I had the same trouble that Mr. Brown had in Scotland a month later.

I expect to receive some more plates in a few days and will then make photographs in natural colors for my regular customers.

Trusting that this will interest some of your readers, I remain,

Yours very truly,

M. A. MONTMINY.

THE AUTOCHROME PROCESS IN A NUTSHELL.

[CONSIDERABLE interest has been aroused by the various announcements of the new autochrome process that have appeared in these pages. The new plates will be on sale in this country when this appears and the following instructions, taken from *The Photographic News*, will be helpful to those of our readers who will be anxious to try the new process.—ED. W. P. M.]

The method of making colored transparencies with Lumière's autochrome plates may now be briefly and clearly outlined for the benefit of our readers who may be disposed to try them, now that they are easily obtainable, and the notes given in this issue are, in addition to being reliable and to the point, condensed into the smallest possible space for ready reference. This page should be carefully kept by every worker.

The latest plates are of sufficient rapidity to enable one to make a snapshot exposure of one-fifth second in a good light at mid-day with a lens working at $f/4$. As lenses working at this aperture are in frequent use on reflex and other cameras instantaneous photography in colors is within the possibilities of the plates under favorable conditions.

Frilling is one great trouble, and an effectual antidote to frilling is as follows: Paint the edge of the film and glass with the varnish supplied before beginning operations (of course, in complete darkness) and allow it to dry before starting development. The varnish is easily applied with a flat camel-hair brush about one-half inch wide. Dipped in the varnish this can be quickly passed around the edges of the plate so that the extreme edge and a little of each side—*i. e.*, the film and the glass side—get a thin edging of the varnish.

In using autochrome plates we must first of all remember that a yellow light filter is necessary, otherwise the whole photograph will come out bright violet; the special screen supplied by Lumière has the very distinct advantage that, if placed behind the lens, it corrects the difference in focus caused by exposing the plate *through the glass*. If a screen be used in front of the lens, then allowance must be made for the thickness of the glass plate when focusing by reversing the ground glass focusing screen. A black card, which is provided, is held against the film in loading the slides to protect it from scratches.

As regards exposure, one second is required for an open landscape with sun shining at mid-day in June with $f/8$. From this it is not difficult to calculate other exposures. But it should be remembered that slight over-exposure is better than under-exposure.

The exposed plate is first of all developed for two and one-half minutes in absolute darkness at a temperature of between 65° and 70° F., and since a safe ruby light is very difficult to obtain, the dark slides should, preferably, be loaded in total darkness also. The special developer is prepared with pyrogallol and ammonia, but is so sensitive to oxidation that it quickly turns brown, and can only be employed once.

Immediately after development the plate is rinsed and put into a solution of sulphuric acid and permanganate of potash, which dissolves out the metallic silver reduced by the developer. This operation takes *one to two minutes*, and is conducted in broad daylight or gaslight. Forty seconds' washing follows this operation, and the plate is

then redeveloped, in as powerful daylight as possible, with amidol and sulphite developer for three or four minutes. It is then again rinsed, and next oxidized by ten to fifteen seconds' immersion in a weaker solution of acid permanganate. Intensification with a pyro-citric acid and silver-nitrate solution follows, which gives greater body to the picture and lasts from one to three minutes, according to the density wanted.

After another short rinse under the tap, the plate is cleared by immersion for one-half minute in a plain (neutral) solution of permanganate of potash, and it is finally rinsed, fixed in acid-hypo, and washed for three minutes.

It is of great importance to dry the plates quickly, otherwise the colors may lose their brilliancy. The plate should be fanned in the air, and such is the thinness of the gelatine film that only a few minutes are required. To protect the film it is varnished when dry, and this concludes the whole procedure.

Complete outfits of chemicals are supplied ready for use by the makers, but the following solutions can be made up and will be found perfectly reliable, according to Messrs. Lumière's latest formulæ, for obtaining the best results.

Certain differences have been made in many of the quantities since the first formulæ were published, and the following can be taken as the most reliable.

The following solutions are wanted:

A.

Pyrogallic acid	46 grains.
Pure alcohol	3½ ounces.

B.

Ammonia, 880	200 minims.
Potassium bromide	46 grains.
Water to make	3½ ounces.

C.

Water	35 ounces.
Potassium permanganate	30 grains.
Sulphuric acid (pure)	3 drams.

D.

Distilled water	35 ounces.
Anhydrous sodium sulphite	½ ounce.
Amidol	75 grains.

E.

Water	35 ounces.
Solution C	3½ ounces.

F.

Water	35 ounces.
Pyrogallic acid	46 grains.
Citric acid	46 grains.

G.

Distilled water	3½ ounces.
Silver nitrate	77 grains.

H.

Water	35 ounces.
Potassium permanganate	15 grains.

I.

Water	35 ounces.
Hypo	5½ ounces.
Sodium bisulphite (commercial sol.)	1¾ ounces.

J.

Benzole	5 ounces.
Gum dammar	1 ounce.

The complete scheme of development will be seen at a glance from the ollowing table, which should be cut out, pasted on cardboard and hung up in the work-room for constant reference during the manipulations.

The inventors can supply a ruby safe light for the dark-room for those who do not like working in darkness, and they will be shortly producing an ingenious "hour-glass" for dark-room use, to show when the two and one-half minutes required for the first development "are up." Cardboard carriers for attaching the transparencies are also obtainable. Everything has, in fact, been done by the praiseworthy inventors to make things simple for the user of autochrome plates.

Operation.	Solution used.	Duration of treatment.
In total darkness—		
1. Development	A, 160 minims. B, 160 minims. Water to 3 ounces. (Add B the instant before starting)	2½ minutes precisely.
Washing	Water.	15 to 20 seconds.
In daylight—		
2. Dissolving the silver	Solution C, full strength, 3 ounces.	1 to 2 minutes.
Washing	Water.	30 to 40 seconds.
3. Redevelopment	Solution D, 3 ounces.	3 to 4 minutes.
Washing	Water.	30 to 40 seconds.
4. Oxidation	Solution E, 3 ounces.	10 to 15 seconds.
Washing	Water.	15 to 20 seconds.
5. Intensification	Solution F, 20 drams. Solution G, 2 drams.	1 to 3 minutes according to requirements.
Washing	Water.	20 to 30 seconds.
6. Clearing	Solution H, 3 ounces.	30 to 60 seconds.
Washing	Water.	20 to 30 seconds.
7. Fixing	Solution I	2 minutes.
Washing	Water.	4 to 5 minutes.
8. Varnishing	Solution J.	

EXPOSURE FOR AUTOCHROME PLATES.

It has been estimated that the new Autochrome plate takes about twice as long as the Watkins' meter paper requires to darken. The makers give, as a rough approximation, for a landscape in bright sunshine, one second at f/8, which would make it about six times as slow as an Ilford ordinary plate. One of the advantages claimed is that, provided one does not underexpose, there is a considerable amount of latitude allowable. For instance, one might give ten times the least allowable exposure without any harm ensuing. Exposure, it should be added, is made through a yellow filter supplied by Messrs. Lumière, and the back of the glass plate is placed so as to face the lens. For which reason, when focussing a subject, the ground-glass of the focussing screen should be reversed. Development is a very short affair, and is one which calls for less than the average skill. A solution of pyro-ammonia is poured on to the plate for two and one-half minutes; it is then rinsed and placed in an acidified bath of permanganate; at this point the plate can be taken out of the dark-room and in a few seconds the photograph in color is revealed in all its completeness, but not perhaps with the full intensity which is required. In order to intensify the colored image, after another rinse it is re-developed with amidol, again rinsed and placed for fifteen seconds in the permanganate reducer; a third rinse is followed by a silver intensifier, which after thirty seconds is poured off; a strong, plain solution of permanganate follows for another thirty seconds, after which a rinsing and two and one-half minutes in acid hypo complete the operations, excepting the washing, which takes five minutes. The plate will, on account of its very thin film, dry in about fifteen minutes. This time is reduced if a fan is used.

COLOR PHOTOGRAPHY BY THE WARNER-POWRIE SCREEN-PLATE PROCESS.

BY WILLIAM GAMBLE,
Editor Process Review.

[RAPID strides are being made in color photography at the present time, and an unusual amount of research work is going forward. The following account of the Warner-Powrie screen-plate process from the pen of William Gamble is taken from the *British Journal of Photography*. The fact that the inventors are Chicagoeans adds to the interest.—ED. W. P. M.

It is difficult to say whether it is a fortunate or unfortunate circumstance that the Warner-Powrie process of color-photography is brought into the full light of publicity after the successful introduction of the Lumière "Autochrome" plate. Certainly it is unfortunate, because the great bulk of photographers, who have not followed very closely the chronological order of the development of color-photography, will be apt to think that process is not novel, and is simply an outcome or modification of the Lumière process, whereas it actually antedates and has possibly in some degree suggested the latter. On the other hand, I think the occasion is fortunate, because the enthusiasm developed by the "Autochrome" plate makes it easy for the photographic public to understand and appreciate the Warner-Powrie process, when it might otherwise have seemed complex.

I doubt whether the majority of photographers would have understood and grasped the full significance of the Warner-Powrie process had it not been for the propaganda in connection with the "Autochrome" plate, and, therefore, instead of being a dangerous rival, the latter really paves the way for a plate or process which, in my opinion, yields more brilliant results, and is infinitely more practical and simple, while possessing a much wider application in the field of color-photography.

Early Results of the Process. It is now nearly two and one-half years ago since I first met Mr. Powrie in the studio of the Barnes-Crosby Co., in Chicago. He was then carrying out some work in color processes for this concern, which is the biggest photo-engraving firm in the United States, and disputes with Carl Hentschel here in London the claim to be the largest photo-engraving house in the world. Mr. Powrie showed me specimens of his process of screen-plate color-photography so modestly that I might have thought they represented the fruits of a casual experiment, and arose from merely a little incident in his every-day work. But I had no sooner examined these results than I felt they portended an entire revolution in the methods of color-photography current up to that time.

I could not believe my eyes at first. I was inclined to suspect some "fake." The result I held in my hand was so immeasurably superior to anything I had seen before in the way of color transparencies that it seemed incredible that it could have been produced by the purely automatic action of photography. It was the portrait of a little girl in a garden, and it had all the glow of life and realism of nature, such as

one sees on the ground-glass of the camera, and has so often longed to fix on the photographic plate.

A Puzzling Principle. There could be no deception about it. The plate was not even sealed over with a cover-glass, and the film surface looked just like an ordinary negative. I took out my pocket magnifier and asked permission to examine the plate, which was cordially granted. Then I saw the familiar striped screen of the Joly process —the alternate lines of red, green, and violet, but ever so much finer than I had ever seen them in the Joly results. Still I was puzzled. The use of the parti-colored screen for taking and viewing I well understood, but here was a screen in the photographic plate itself. It seemed incredible. Then Mr. Powrie explained that the screen was put on the glass before the coating of emulsion was applied, and that the exposure was made through the back. Well, that seemed feasible. But surely a negative image must give negative or anti-chromatic colors, and the plate I held in my hand was a positive, and showed the true colors of the natural object represented. Yet, logically, of course, if it was possible to make a negative color result it must be possible to make by some means a positive and complementary picture from it, and Mr. Powrie enlightened me by explaining that he was able to make a positive screen plate to reproduce the negative image. Nevertheless, it still bothered me, just as it has since troubled even so good an authority on color work as Dr. Mees to understand how a colored line-screen positive could be printed from a colored line-screen negative. The old adage, "seeing is believing," was again exemplified.

Miss Warner's Part in the Process. I afterward had the pleasure of meeting Miss Warner, who has been associated with Mr. Powrie throughout the experiments which are now culminating so successfully. It is no secret that Miss Warner has furnished Mr. Powrie, an old friend of her family, with the necessary financial aid to carry out his invention. But Miss Warner has done more than this: she has taken a deep and untiring interest in the experiments connected with the process, and has assisted in the laboratory work. Mr. Powrie gratefully admits that his success is due to Miss Warner's ability to comprehend the utility and importance of his invention, and to her faith in its ultimate success. Her share in the invention, he declares, is more than a co-partnership interest, and that is why he insists on calling it the Florence Chromatic Process.

Mr. Powrie's Experience. Mr. Powrie was originally working in the half-tone process when it was in its crude state, and had to be accomplished by means of plaster casts from swelled gelatine, over twenty years ago. He was then engaged in a half-tone business in Milwaukee, in 1892, and from thence he migrated to Chicago to join in partnership in a three-color business in 1896. He was one of the first to apply the present-day three-color process to lithography. About this time was formed the International Color-photo Company, which proceeded to work the MacDonough process. The company eventually failed after spending, it is said, nearly $500,000 in its attempt to find a way to color-photography through the MacDonough-Joly methods. It will be remembered that this company attempted to introduce the process into England, opening an office in London, and showing some results at the Royal Photographic Society's Exhibition in 1900, without, however, arousing any enthusiasm.

MacDonough began a systematic study of color, afterward taking up photography, and finally endeavoring

to carry out the idea put forth by Ducos Du Hauron some time about 1868 of using parti-colored screens. He first tried to stipple a screen by spattering it with color; and another of his numerous ideas was to powder the surface of a glass-plate with particles of colored glass (a very good anticipation of the Lumière starch-grain process). Eventually he decided to confine his efforts to ruling screens, and had constructed for him most elaborate machinery.

MacDonough never got any further than using a separate taking and viewing screen, as in the Joly process, except that he was able to rule finer screens. He did not live to see the outcome of his efforts.

Expensive Litigation. The reason the MacDonough process failed was that no cheap way of producing the color-screen could be found. But Mr. Powrie developed his plan of doing it by means of bichromate printing from a ruled screen of black lines. He applied for a patent on it in 1901, which he only secured after expensive litigation. His application was contested by Ellsworth E. Flora, who was general superintendent of the International Color Company's works, and who claimed priority for the invention. Flora claimed that he prepared his screen in the same way as Powrie, and submitted a specimen. But a microscope revealed an intervening streak of transparent gelatine, which the patent authorities maintained to be inconsistent with the alleged method of Flora. The Court, with a Solomon-like wisdom, gave Flora the opportunity of proving the claim by making a screen like Mr. Powrie's, but the challenge was not accepted. An appeal was taken, which resulted in the ruling of the Patent Commission being sustained. Then a further appeal was made in the Court of last resort in such cases, and the final decision fully sustained Mr. Powrie's claim. The cost of the litigation was paid by Miss Warner, and she worked indefatigably with her legal adviser to bring the matter to a successful issue, believing, as she did, so strongly in the justice of Mr. Powrie's claim. Since then the International Color Company appears to have disappeared from the field.

Making the Screen-plate. For the past three years Mr. Powrie has been busy perfecting his ideas, first in Chicago and latterly in New York. He has evolved a systematic way of making the screen-plates by printing them on bichromated gelatine from a specially-ruled Levy screen. By adopting a moving arc light for printing, and providing a framework which holds the screen-plate always at the same distance from the light, as also by arranging the operations to follow in a regular mechanical sequence, there should not be any doubt about securing absolutely uniform results. The only difficulties I can conceive will be those due to dust and air-bubbles during the coating of the plate, but with proper precautions these can be avoided, just as they are in any dry-plate factory. I understand the coating of bichromated gelatine is put on with a whirler, as in photo-engraving, and, although this is not such a mechanical way as that used for coating plates with gelatine bromide emulsion, it ensures, at all events, an extremely thin coating.

An Optical Aid. The method of placing the sensitized plate a second time in contact with the "mother-screen" without requiring elaborate means for registering it parallel to the first impressed set of lines seems to me a very pretty one. Mr. Powrie takes advantage of the appearance and disappearance of moiré patterns when one-line system is superposed on another. If one rotates either a single-line or cross-line screen in contact with another most extraordinary patterns are ob-

tained, and they disappear the moment the lines become exactly parallel to each other. Thus, Mr. Powrie makes his apparatus so that a slight turn of a screw one way or another causes these patterns to vanish, and then he knows the screen and plate are in adjustment.

Printing in the Third Line. More ingenious still is the way he prints through the transparent space found between the first two lines to make the third line exactly fill the vacant space. It is altogether an extremely well-thought-out method of making the screen, and I hardly see how it can be improved on. It might be possible to impress the screen image on to the glass plate with a rubber stamp or roller, but the lines would undoubtedly be thicker at the edges, and would make an overlap of double thickness, forming almost opaque parts, and giving consequent streakiness to the negative.

By Mr. Powrie's method there is neither any retardation of the light by black separating lines, nor dilution with white light through the colored lines being separated from each other. All the light must pass through the colored lines, and by making an emulsion of suitable panchromatic quality, its sensitiveness agreeing with the absorptions of the colored lines, great rapidity can be obtained, toegther with the utmost brilliancy of the colors.

Simplicity of the Process. If the Warner-Powrie process ended with the production of the negative, and it was converted by a reduction process into a positive—as no doubt it could be by a method analogous to that adopted by Lumière for the "Autochrome" plate—it would in itself be a great accomplishment, but the ability to print as many positives as may be desired merely by contact is of immensely greater importance. Mr. Powrie might well be content to rest there, and, perhaps, from a tactical commercial point of view, it would have been better to do so, keeping the further developments "up his sleeve," so to speak. I am afraid that the description of his method of preparing duplicates and printing on paper is apt to confuse the majority of photographers who are not inclined to go deeply into things, and to make them think his process is a complicated one beyond the capacity of the average man. Demonstration will soon dispel this, as the process is really very easy and requires the simplest apparatus.

This latter feature is one that distinguishes the process from many others that have been put forward. Practically, the photographer employs his usual apparatus and materials except the special plates. He does not require any special camera or dark slide, and he can extemporize with an ordinary printing frame if he desires to adopt one of Mr. Powrie's methods of duplicating the results. Moreover, there is the choice of any system of lighting for the printing—either daylight or electric light (arc or incandescent) and gaslights. For development of the plates it is simply ordinary routine and ordinary chemicals. All this will appeal to the amateur who does not want too much trouble with the processes he takes up.

Application to "Uto" Paper. I am afraid many people will think Mr. Powrie's claims are so numerous that he is romancing, whereas he is only stating in sober fact what he has accomplished. In rendering the use of the Uto paper practical, he has done an excellent thing, because it promises to be one of the easiest and most direct ways of making color prints on paper. Nothing has been said yet of the application of the screen-color plates to stereoscopy and the lantern, in both of which directions Mr. Powrie has done good work.

Usefulness for Three-color Block-making. Finally, what to me is the most

interesting application is the duplicating (or, rather, should I say triplicating) his screen-plate negative to form a set of continuous tone-negatives for three-color block-printing. It will be a great power in the hands of the process block-maker if plates made in this way can be utilized. It will enable him to send a photographer with an ordinary camera to any picture gallery, or to take any view required in colors, and to quickly obtain a color transparency which will not only be an effective guide for the etcher and the color proofer, but will give him from the negative trichromatic a set of positives from which he has only to make half-tones in the customary way by transmitted light.

The Coming of the Colored Newspaper. Such an application of the Warner-Powrie process will be an immense stride forward in three-color printing, and will bring us nearer to the possibility, always hoped for, of obtaining colored pictures of current scenes, at least, for our weekly illustrated papers, if not yet for our daily newspapers. There will also be an important field for the process in preparing blocks for colored picture postcards, and in color-lithography it can be a useful adjunct by reason of the facility with which the color stones or plates can now be prepared from continuous tone negatives by such methods as the Frey process, which makes use of a bitumen grain.

In my opinion, the advantages claimed for the Warner-Powrie process are by no means exaggerated, and it only needs the aid of the dry-plate maker to bring this wonderful process into everyday use.

MEREDITH JANVIER—WITH A RUSH.

BY SIDNEY ALLAN.

HERE we have a man who is neither to hold nor to bind. He is the most energetic, "go-ahead" man in the business. He has made up his mind to get to the top and he will get there by sheer nerve and pluck. He is almost there now, and yet a few years ago he was absolutely unknown to the profession. He was an amateur who exhibited at the Philadelphia Salon, the Pennsylvania Academy of Fine Arts, and at the Linked Ring, London.

And now look at his record. He himself has furnished the data:

1900.	Began as amateur.
1900–1902.	Amateur work—all classes.
1903 (July).	Began a one-man's studio.
1904.	Began home and studio portraiture. Hired one woman assistant.
1905.	Hired one man assistant.
1906.	Hired one more man and one more woman assistant.
1907.	Hired one more man assistant. Rebuilt studio (entire four-story house). Made trip to Europe on money made after the first four years.

This is doing fairly well. Plugging away, building up his business steadily, step by step, from a one-man plant with one room for studio and work-room, to a nine room and five selected assistants, within four years. Very few men could repeat this feat, to take up a profession in that short span of time, own a place to work in, and top the fourth year's close by a trip to Europe, having made the money out of his business in competition with the best men in America. It seems to become the fashion for successful photographers to summer in Europe. It is meant to convey to the outsider a certain air of prosperity, but as going abroad is (or

at least comparatively) cheaper than staying here, I do not attach so very much importance to it.

The Janvier studio is a quaint and old building—built, some say, as early as 1812. Its decorations were, many of them, made by Mr. Janvier's own hands. Thus, in some cases, if the artist could not secure in the shops just the right sort of an Indian mask or the totem pole he wanted, he carved them himself. He also made many of the frames in which his portraits are shown, and he always asks his sitters to allow him to select the frames for their portraits, so that a good print may not be ruined by its surroundings.

The studio proper is quite different to the ordinary gallery. It has no skylight and there are no painted backgrounds, no iron headrests, and none of the regulation accessories in sight. Large, single slanting side-light (facing north) with top skylight connected (à la Notman of 1879), side windows eight feet up from the floor at each end, and green burlap in place of wall paper. On entering the room it seems to be almost empty. There are two of the King light controllers—a rotary dais, and, of course, a camera. There is a movable frame, too, with which he can utilize dark, gray, or white backgrounds. The new studio opens where a section of wall was removed into the old room, a part of the house proper. A cozy fire is burning in the open grate. The walls are covered with old arms, paintings, and engravings; and some bits of unique furniture make the room attractive.

Personally, the photographer is quite interesting. He has a fine, sensitive face allied to a stalwart person. He is a short man, possibly not more than five feet eight inches tall. In his studio he wears a gray Norfolk jacket, but it is not of velvet, and his hair is not long, for which his admirers praise the saints. His manners are easy and very cordial; he says he is a man without nerves and he looks it. It might be added that he was eight years a lawyer; his butting up against all kinds of people has made him a good "mixer." He is never off his guard and handles conversation "like a Jap juggling tennis balls" (these are his own words). And really the best way to get an idea of the man and his method is to let him explain things.

"The average man," he may tell you, "comes into the studio and throws himself down in a chair and says: 'Take my photograph as soon as you can, please. I don't want it, but my wife does, and I suppose I will have to humor her.' He is a good subject. He will walk away forgetting all about himself, and I will snap him for one of his best expressions, and the picture will be a great success, and so pronounced by his friends. This is the average man. There is another class which is as particular about the folds of its coats and the sets of its cravats as a woman could possibly be about her gown. I leave it to you to determine whether it is above or below the average. A third class is much more fastidious than women, and is very troublesome. There is only one rule to observe in taking the portrait of a woman, and that is one of the English school of artists—to flatter, flatter, and flatter. As a rule, pretty women take ugly photographs and homely women usually take pretty ones.

"My object in taking a photograph is to catch my subject while he is in repose, of course, but with as alert and forceful an expression on his face as possible. In order that I may do this I bring him into the studio, if he is going to have his likeness taken here, and ask him to sit down. I have the camera here in the only dark corner of the room, as you see. Then I begin to talk with my sitter, having first ascer-

tained that his chair is properly focused. When he is interested I say suddenly, 'When did you say you were going to Washington?' or something of the sort. Of course, he hasn't said he was going to Washington, and so when he looks up, surprised, and eager to correct my false impression, I snap him. During the course of our conversation I ask something else which calls forth another good expression, and I snap that. Thus I have two negatives, one of which, at least, will probably be good. After this I pose my subject and try to get one or more of him as he sits more artistically posed."

Like Mr. Stieglitz in New York, Mr. Janvier in Baltimore enjoys the reputation of being a splendid lunch entertainer and of dining his sitters first before he snaps them.

"Come about lunch time," he will say, "and take the whole course—lunch, a talk, and be photographed. Thus will you learn much more about my methods than I can possibly tell you. You know," he will furthermore explain to you, "it was a rule of Sir Joshua Reynolds never to paint a subject until he had dined with him, and I do like to have a long talk with my people and a chance to study them before I place them in front of the camera. I am not an artist. I could not in a hundred years sit down here and paint a portrait of anyone, and I have not the patience to paint it if I could; but I hope I am artistic. One reason I like the camera is because it gives quick results. You can see what you have done before you have time to cool off. You have results before discouragement comes. There are lots of discouragements in the work you know. It is a discouragement in a way to find that you got as good a picture the first week you began this work as you can the fourth year after you have been in the profession. And yet an accident of this sort often happens, and it brings a shade of discouragement with it. In this, as in everything else, one likes to feel that he has progressed. But there is so much that is delightful about photographic portraiture that it is idle and foolish to dwell on the occasional bad moments one has."

I have not yet said anything about his work. I have seen portraits by him of all kinds—low key, high key, and a conversative of lines. His tones and gradations are at times very soft and delicate. For a time he made a specialty of carbons transferred on porcelain and canvas, and of enlarged negative work, head studies of children half life-size, along artistic lines. I will refrain from further criticism. I do not know whether I would patronize him; I might and I might not. Certain it is that he charges as much for his work as anybody in the business. It is not his work I am particularly interested in. In this instance it is the man.

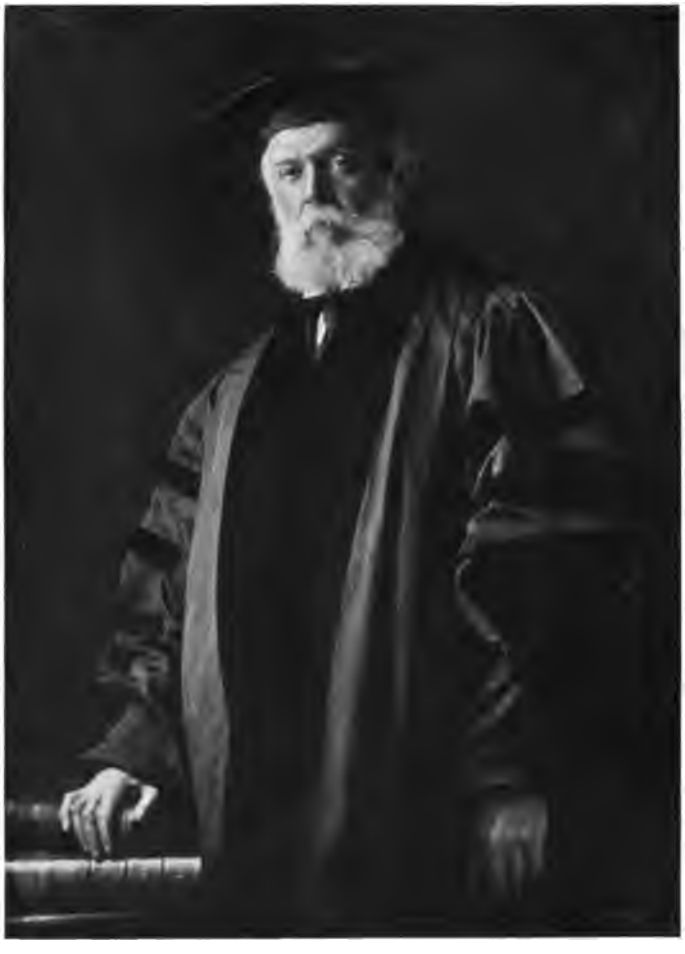
I admire him for his determination, for his ambition, and for his ability to deliver such goods as to make him successful. He ferrets things out for himself; he does not need conventions, he teaches himself; he is ever on the alert, picks up things here and there, and experiments until he has put into practice what he wants and is in need of.

Every photographer in business could learn a lot from Meredith Janvier.

Photographic "Nature Fakirs" take notice. After posing as a mermaid in a lily pond in one of the Wichita, Kansas, parks, Miss Mona Payton, nineteen years old, was sent home and the photographer, J. J. Todd, of that city, was arrested. Todd said he proposed to enter the photograph in a prize competition.

By Janvier, Baltimore, Md.

Home Portrait by Janvier, Baltimore, Md.



Home Portrait by Janvier, Baltimore, Md.

By Janvier, Baltimore, Md.

Home Portrait by Janvier, Baltimore, Md.

By Dührkoop, Hamburg

Outdoor Portraits by H. F. Walbridge, Pittsburg, Pa.

Outdoor Portraits by H. F. Walbridge, Pittsburg, Pa.

MODERN PORTRAIT PHOTOGRAPHY.

THE WORK OF E. O. HOPPÉ.

Studio of E. O. Hoppé, London, W.

[THE following account of Mr. E. O. Hoppé's beginning as a professional portraitist is interesting as showing the tendency of the photographer to get away from the old-time skylight studio. Pirie MacDonald has demonstrated the practicability of the ordinary room in the office building in New York. We are indebted to Mr. H. Snowden Ward in the *Photographic Monthly* for our account of Mr. Hoppé's work.—ED. W. P. M.]

The "modernizing" of professional photography has proceeded from two causes: first, the desire for progress of the professional himself; second, the infusion of amateur ideas. The drag on the progress has been twofold, also: first, the philistinism of the paying public; second, the belief in certain quarters that eccentricity is art. There was the old-fashioned idea of making a commercial "likeness," which led to the hackneyed conventions and poses of the period sacred to "standin' beside a table whereupon reposes a book, with a pillar, an' a vase an' a curtain for accessories." There are still photographers who cling to some of the old conventions and believe that money can only be made by giving the half-dozen stock poses, with the three or four stock lightings and the one retouched-to-death stock texture. At the other end of the scale are certain amateur and semi-amateur workers who seem to think that a portrait study must be something bizarre—something quite unrecognizable by friends of the sitter.

Between these two classes we have

advanced professionals like Crooke, Annan, Hollyer, Barnett, Dührkoop, Falk, MacDonald, Strauss, Hollinger, and many others; and the newer "amateur-professionals" of whom Furley Lewis may be taken as a type. These people contend that there *is* a paying public for portraits combining recognizability with some attempt at pictorial quality, and the newest recruit to their ranks is the subject of the present notes.

E. O. Hoppé, who has been a banker by profession and a photographer by hobby for many years past, has left the City, and today (October 1, 1907) opens a studio at 10 Margravine Gardens, London, W., as a professional portrait photographer. His work is fairly well known to frequenters of the exhibitions, and suggests the impress of a strong, impulsive, imaginative, but somewhat erratic character. One of the surprises in store for those who take note of such things will be the realization of how rapidly and how fully Mr. Hoppé has obtained control of his art, and become the master instead of the slave of his somewhat exuberant fancy. In assuming this control he has been aided by his great earnestness and intense singleness of purpose. Since deciding to enter the profession, he has bent all his energy to evolving styles of portraiture that shall give results acceptable to sitters and their friends, yet not such as can be despised from the exhibition standpoint.

To photography Mr. Hoppé brings a mind trained in the academic atmosphere of Munich, where he studied under the direction of two famous painters, Lenbach and Kaulbach, both of whom were intimate friends of his father. From them he learned two great lessons: (1) The importance of leaving out; and, (2) that arrangement and distribution of light and shade are the making of pictures. From them, and from his own photographic work, he gained a dislike to "the conventional glass-house, with all its accessories, painted backgrounds and head-rests, and with its results which are anything but true to nature;" and therefore when starting for himself he felt fortunate in securing a work-room recently used by Alfred Garrett, R. A. This studio has a large window to the north, but in all other respects it is simply the home-room of an art-lover, with simple furniture, a few pictures and antiques, and a small scattering of books, magazines, and portfolios.

As regards methods, Mr. Hoppé has nothing new or revolutionary. He issues no price list, and prefers to make terms for supplying one or two pictures rather than to quote for prints by the dozen. He strongly objects to retouching, and for its avoidance gives special study to lighting, and uses a slight—very slight—diffusion of focus. He is willing to carry this diffusion as far as it can go *without beginning to destroy the rendering of structure and texture*, and this seems a very safe rule. He likes as long a time as possible for a sitting, and tries to secure one or two interviews with the sitter in advance, that he may know as much as possible of the tastes and interests of the subjects before making an exposure. He relies upon this knowledge for securing a characteristic pose and expression. Another reason why time is needed for a sitting, is that most sitters make a conscious effort to look their best, and defeat their own end by assuming a forced, unnatural expression. To break down this self-consciousness is a first object, and Mr. Hoppé tries to arrange both the posing and the exposing so that the subject is not aware of the actual time at which the exposure is made. He says that he always tries to look below the surface of a man, and to portray something of the temperament.

The hands are included in a very large proportion of Mr. Hoppé's portraits, for he points out, very rightly, that where there is individuality of character, it is

shown almost as strongly in the hands as in the face; and the hands confirm and amplify the story told by the features.

It is obvious to anyone who has studied much of his work that Mr. Hoppé is greatly interested in symbolism, and he introduces it to a considerable extent into his portraiture. Often the suggestion is so subtle that it will only appeal to those who know the sitter intimately. An example of this is his portrait of Mr. S. Elwin Neame, one of the most successful portrayers of the draped feminine form. The introduction, hazy and half-expressed, of one of his favorite models in the background, is a touch of this symbolic idea. A more subtle touch is found in the portrait of Fortini, war correspondent (see *Photograms of the Year*, 1907). The line of gray down the right side of the print is intended to hint or indicate the changes of scene and place involved by the sitter's occupation. He stands, definitely, in a space; but close beside him is another—gray and indefinite. This particular portrait well illustrates a characteristic feature found in a good deal of Mr. Hoppé's work. It is a power of giving great roundness and relief to the figure, and of making it stand out from the background even when that background is ungradated and almost black. Many a portrait that has fair round-

Portrait Group. E. O. Hoppé

ness still looks as if the figure were stuck against the background, but Mr. Hoppé's are starting forth, ready to come from the frames, full of life and animation. This cannot be appreciated when the pictures are held at reading-distance; but stand them against the wall, retire three, four, or five feet, and the effect will be clear.

Simplicity of composition, isolation of the *real* subject, decorative arrangement of the masses and lines, strong placing of the main object (usually the head) and harmonious distribution of light and shade—these, I take it, are Mr. Hoppé's five principal aims from the pictorial point of view. The portraits I reproduce will show how far he succeeds. Studying his work as a whole, and knowing its evolution from very immature efforts, I think that he is of one the most interesting personalities introduced into the profession of late years, and I predict that his development will be one of the most instructive studies during the next decade. *If* (and it is a most important if) he does not attempt too much, and break down under the strain.

FLOWER PHOTOGRAPHY.

BY EDWARD SEYMOUR.

(Concluded from page 464.)

A DIFFICULTY which frequently arises is movement from heat, etc., in the summer. On one occasion I had exposed a plate on some tulips, and as I developed each plate immediately after exposure I was surprised when I came out of the dark-room to find my tulips all open and full blown. In a study of this, made recently on a very hot day, I propped up the centre petals with soft white tissue paper, the next one I "helped" with a crutch of thin card, and glued the tips on the petals together, otherwise the flowers would have drooped and fallen during exposure, or, at least, altered sufficiently to blur the image.

Composition and Accessories.

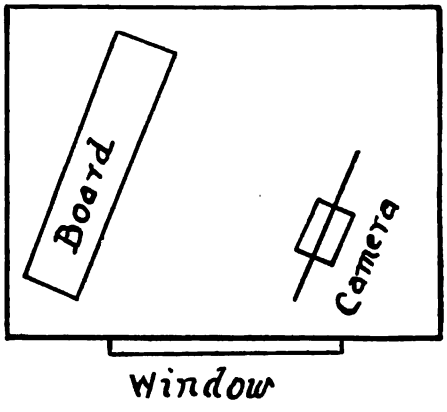
Composition, I know, is a difficulty: it must of necessity be limited, and in a number of studies one often repeats one's self. I generally try for curves or pyramidical forms. One is often tempted to include too much, and the group should be very carefully examined before exposing.

When the study is arranged the last thing to do is to go over it and see how much can be taken away with the scissors without spoiling it, especially in the case of natural sprays of fruit.

A fellow-worker, writing in an article on flower photography, referred to my work, and stated that he could not remember seeing a study of mine that contained a vase or a dish. He is quite correct (although I am now including some in my later work). It is difficult to get a vase or dish or support into a sufficiently subordinate position. When one looks at the picture only the vase is seen. I also find that it generally makes the picture top-heavy, and if you place some of the blooms on the table one loses the line of continuity, and the subject is divided. In fact, there frequently appears to be two pictures. If one must include a vase, one of a dark color, or clear glass, should be used, always quite plain and simple. An ordinary tumbler is not to be despised, and a narrow upright French pickle bottle is quite ideal.

If I wish to make a grouping of fruit and similar subjects, I cover a flat board

(see illustration) with ordinary brown paper. This is the best thing to use; it is very unobtrusive and cheap, and having satisfied one's self with the arrangement of the study, focus very carefully upon it. If one is taking, say, a ¼



plate, and the subject is large, such as iris, chrysanthemums, then there is no difficulty, but if small subjects, such as violets, buttercups, etc., are being photographed, and it is desired to make then nearly life-size, one requires to be careful in focussing. One can only get one plane in focus with a large aperture; therefore, focus on one of the principal blooms—say, in the centre—and stop down until all are in focus, but if possible miss the background. Don't stop down unnecessarily, remembering, however perfect you get your print, if it is hard you will have missed the mark.

Some people do not like to see all the flowers in focus, but I do, especially where there are only three or four blooms, and almost life-size; they are practically in one plane, and we see them all at once and quite clearly. When a bloom is close to one we look for its texture and beauty; it would be different in the case of a garden scene, with its masses of color and effect or even a huge bouquet.

Lighting and Exposure.

When focusing we must also decide on the lighting. I have seen it recommended that the subject should be some distance from the source of light. I cannot recommend this plan. I have already given the width of my working-room, viz., 4¾ feet; my board is eighteen inches from the window, which is covered with thin, common, white art muslin.

At a recent evening at a photographic society I was talking about exposure, and one member stated at *f*. 16 he gave thirty-five minutes, and was under-exposed at that.

It was very rude of me, I admit, but I could not help asking him if he took his studies in the coal cellar.

May I here say that my exposure in a fair soft light, (mine is a north light) at *f* 16 is about 30 seconds. In taking 12 by 10 with a 1/1-plate lens one must stop down to *f*. 32, and sometimes *f*. 45, to get it to cover and sharply in focus; but that means five or six minutes.

I prefer a three-quarter side light (see figure), and the exact form of lighting must be decided according to the flowers photographed. Some petals are all open and exposed, whilst others are partially so; for examples, the daisy and the buttercup. For the former I use a quite side light, and have the board at right angle to the source of light, and in extreme cases a slight turn away from the light—this gives light and shade—whilst for the latter subjects I turn the board slanting to the window, so that I can get the light right into the bloom.

There is no excuse for wrong or bad lighting. One can look through the camera and see exactly how it appears, and one can turn and move the board or camera until just what you want is secured. A sheet of white cardboard will reflect light if the shadows are too heavy.

I would here warn the beginner not to have too much front light. It will destroy the shadows. Remember the secret of making the flowers stand out and detached from the background is obtained by having sufficient shadow and correct lighting.

As regards exposure, the color of the flowers is a factor in this matter, as well as the light, also the size of the flowers. This will necessitate the camera being brought near to the subject if small, or at a distance if large, for a given size plate.

I find white or blue colors require only two-thirds of what will be required for a yellow, and for a deep yellow I give at least double what is required for white.

In taking large-size pictures I have a carrier to take a ¼-plate, and first I get sufficient of the picture to judge exposure before taking a 12 by 10 picture on a similar speed and kind of plate. Plates of this large size are too expensive to waste on trial exposures. I want the first one to be correct. I rarely expose more than one large plate unless movement of the blooms spoil it. I mention this to show that if one is careful, and thinks out the various details, one need not waste plates.

I now take two of each subject, as I have been taught a lesson. I won a considerable sum of cash in a certain prize competition with my studies, and did not realize that I had to part with the negatives until too late, and to my very great sorrow had to give them up, as I could not part with the negatives and copyright. Of course, it rarely rains when you are prepared for it. Now I take duplicates there are no cash prizes about, or, at least, they don't come my way.

Always remember that under-exposure is fatal to flower work—don't forget the golden rule: expose for the shadows. Probably white flowers and green leaves are a favorite combination. Expose for the leaves, and, if very dark green, wet them with a plug of cotton-wool just before exposing,—it will lighten the color.

No Color Screen Necessary.

Give a very full exposure, and this brings me to the need of a color screen. I have said I do not set myself up as a teacher. If you already use a screen, and get good results, stick to it. My only objection to the use of a light filter is the long exposure required and the consequent risks of movement.

I have just made a study of buttercups without a screen, and obtained an excellent negative; yet, I thought I would try one with a screen (which someone has sent me since I started writing this article). I have taken three different negatives, and I have movement in each instance. I began to wish my friends had some plates as well as the screen.

My method, therefore, and one that can be recommended, is to avoid the use of a light filter by selecting colors that will enable the photographer to do without one. The plan is simplicity itself, and the variety of material at hand to help one is enormous.

I have made some hundreds of studies, and have never used a screen more than in 10 per cent. of the exposures.

I had a visit from a well-known plate-maker and he said: "How is it you render your yellows so true without a filter?" I don't understand why; but I invited him to see me expose and develop yellow daffodils, and obtained some perfect negatives. The secret lies in the exposure, which should be of sufficient length to enable the colors of little actinic value to fully register on the plate. In many cases the use of a screen will rob the picture of all half-tone, and give an effect very unsatisfactory to the observer of Nature.

Development.

Having arranged our study, and exposed it, we must now proceed to develop the plate. There has been a deal of controversy on this subject, and a marked difference in opinions.

The reader can judge from what I have already explained that I do not use factorial or time development. The subject always crops up during my evening talks on flower work at different photographic societies' meetings, and I am pleased to find that many workers who have used the factorial system give it up in favor of the older method of development—at least, they do so for their flower work. Personally, I cannot appreciate its advantages for serious work. I want the density of my negatives to suit the color of my subjects and the printing process. The less mechanical means associated with art the better. I can quite understand that to a beginner who does not know how to develop, the time method would be of great advantage. As a rule, directly the image appears it is taken out of the developer and fixed, and the image is then practically invisible. To such beginners the time method is a great help; but once developing is mastered, Why be pinned down by a hard-and-fast rule? Some will say: "But you can modify the factor." But it is useless if you use your developer twice—if you add more alkali—if you dilute—if you increase the temperature —after the developer has acted on the plate.

I have tried time development again and again when I have read about it. I think it must be right, but when I put it in practice I find the old argument prevails—one ounce of practice is worth a pound of theory.

Having given the plate a full exposure, I usually proceed to develop for density, pluck, and brilliancy.

I use the following developer:

No. 1.	Metabisulphite of potash	15 grains.
	Water	20 ounces.
	Pyro	130 grains.
No. 2.	Sulphite of soda	2½ ounces.
	Carbonate of soda	2 ounces.
	Water	20 ounces.

I know the pyro will give me all I want. I take three parts of No. 1 pyro and one part of No. 2. If exposure is not quite full enough, I make up to equal parts, and dilute with water.

The appearance of the image will give me the clue how to proceed. Most people judge the proper stage of development by the appearance or not of the shadows. I do just the opposite. I judge by the density in the highest high light. The shadows or low tones will be all right, because a full exposure has been given, and directly my high lights have reached a certain depth of density I place the plate straight into the hypo fixing bath without washing, to arrest further development. What I want is detail in the high light. This is the secret of success of flower studies. On no account overdevelop. Never do this, even if you have a ghost of an image, as it can always be intensified. If you overdevelop the two or three tones, the high lights will gather together and give an opaque mass of density, without any detail, whilst an over-exposed negative is thin and flat, but may be full of delicate gradation, and the intensification will build up each tone value in its correct order.

Be sure the dark-room light is safe, and after the image is well out do not be afraid of looking at your negative by transmitted light, so as to stop developing at the right moment.

In conclusion, I trust many, especially young photographers, will take up this branch of the art. There is no hobby extant to compare with photography, and and no branch, in my opinion, to compare with the photography of flowers.

PORTRAITURE.

DOUBTLESS the most generally interesting, and probably the most important, of the various branches of photography is portraiture. To represent the individual with fidelity, character, and a regard for decorative composition; to preserve the human entity, as it lived, in something more enduring than the memory, so that it may still be seen by those separated by time or distance, is an ambition that may well stir the artist. In landscape, Nature with all her moods continues much the same through the ages, but the human being is distinct and individual, developing in a special set of conditions that cannot recur. Consequently it can be said that the portrait-man has a more exacting task than the interpreter of landscape. The truth of a portrait cannot be checked by posterity, which can only accept the statement as it is given by the artist, and his responsibility is, therefore, the greater.

Probably the average person, if questioned as to what was the chief duty of the portrait maker, would reply: To get a likeness; and if further asked what constitutes a likeness, would very probably say: The shape of the features, especially the eyes and the mouth; the quality of the complexion, or other marks on the face; the expression and the shade of the hair. Truly a resemblance, based on these peculiarities, might be recognizable, but it would be a very superficial, even a temporary affair. Such appearances are subject to transient change with every emotion, and to permanent change by time. The likeness seen by one person, under one set of conditions, will scarcely satisfy another who has known the subject in a different aspect. What is likeness? It is not altogether an objective matter that makes its appeal by a set arrangement of form and color, so that what one sees everyone else sees, and as to which there is no room left for diversity of opinion. It is at least to an equal extent subjective, depending on the point of view of the beholder, his mental attitude, and the degree of sympathy that he feels for the person portrayed. Love would certainly not accept a likeness made in hatred, and hate would laugh contemptuously at the presentment that appealed to love. Between these two extremes there are many variations. The friend, for instance, with a keen and penetrating appreciation of character, would not praise the portrait made from a standpoint of complete indifference to the underlying individuality, by one who concerned himself only with physical peculiarities. Likeness, then, if it is understood to mean such surface developments as immediately attract the eye, is insufficient. Moreover, it is dangerous, for insistence on such appearances must involve the neglect of that which is more fundamental and permanent.—*From Art and the Camera.* By Antony Guest. The MacMillan Co., New York.

Labelling of Bottles.—In the *Photo-Revue* the following is given for writing labels on glass:

A

Sodium fluoride	86 grains.
Potassium sulphate	7 grains.
Water	1 ounce.

B

Zinc chloride	14 grains.
Hydrochloric acid	65 minims.
Water	1 ounce.

Mix just before use and write with a quill pen or fine camel's hair brush.

RUSHING WORK.

BY A. J. JARMAN.

ONE of the most prominent causes of bad photography and defective photographs is due to rushing the pictures through, either to gain time or for extra profit.

In cases where a print is wanted in a hurry for newspaper illustration, from which a half-tone or line plate is to be made, the hurrying of the print is of no consequence providing it is perfect in detail and generally representative of the subject to be illustrated, because it does not matter whether the print possesses a lasting quality or not; but in the general line of photography, especially in portrait work, it is of the utmost importance that the prints should be made as permanent as possible. There is one thing that is both sure and certain about a portrait: Should that portrait fade, as it assuredly will do if every operation is not conducted with care and intelligence, and sufficient time devoted to every operation, the name of the photographer who produced it will become known to many persons who will avoid becoming a customer entirely through this fading portrait.

Take, for example, the large number of platinum portraits that have become a canary yellow in those parts that should be represented by white. This is entirely due to scamping or rushing the prints through the various operations, not allowing sufficient time for the chemicals to become thoroughly washed out of the body of the paper, so that the smallest trace of the iron salt that remains therein will, in the course of a short time, become attracted by the oxygen of the atmosphere and cause the yellowing. Although this defect cannot be regarded as fading in the strict sense of the term, yet it is so regarded by the public.

This defect can be entirely prevented by the use of an extra acid bath, and the well washing of the print, giving a reasonable amount of time for the wash water to permeate the paper. One very important point should be borne in mind and acted up to in the handling of a batch of platinum prints upon thick paper; the heavier the paper the longer will be the time required in each operation to allow the water to penetrate, and thus clear out the chemical substances which, if allowed to remain, will endanger the permanency of the prints. A fourth acid-clearing bath in such cases will ensure clean and brilliant whites, the extra cost of material and the time involved in carrying out the operation will assuredly well repay the photographer by the repeated recommendation of his work and the additional customers he will secure.

A point of no small importance should always be attended to in the rushing of work: the trays that are used should be kept strictly for use of their respective solutions. It is within the writer's knowledge where a large-size fixing-tray has been used for holding an acid-fixing bath in the morning for the fixing of developed prints made upon the modern developing paper; then in the afternoon the same tray being employed for the fixing of printed-out photographs, such as aristo-platino and gelatine, in a plain hyposulphite of soda fixing solution. The result being that very often the aristo prints were stained with brown, patchy stains, and sometimes the gelatine prints as well.

At once the blame is placed either upon the paper or the hypo, sometimes miscalled a hypo stain, whereas the hypo has nothing whatever to do with it. These brown stains are entirely due to some developing agent coming into contact with the trace of free nitrate of silver contained in such papers and causing a partial metallic reduction. The rushing of work under such conditions, and the want of care in having separate trays for the different fixing solutions, are continued sources of both loss and annoyance to the photographer. Both oil-cloth and india-rubber cloth-lined trays contribute largely in producing these defects, because it will not matter how careful one may be in rinsing out the tray so lined, there can never be any certainty as to the complete elimination of the chemicals from the cloth.

Some of the rubber sheeting that is used for the lining of trays is also a prolific cause of the yellowing of the whites upon such paper as aristo-platino. Only a short time since a case of this kind arose where prints of large size were made daily upon the above paper, varying from 11 x 14 to 16 x 40. Many prints, 18 x 22, were spoiled entirely through being squeegeed upon the bottom of the rubber-cloth lined tray. Contentions and argument were indulged in, all to no avail, the real cause having been discovered to be due to the sulphur contained in the rubber covering, which caused a very slight film of sulphide of silver to be formed, and which did not become fully apparent until after the toning bath in gold and platinum. When placed into the hypo-sulphite fixing bath the yellow sulphide of silver stain became apparent, and no means that was employed would remove the stain. Neither chlorine water, dilute hypochloric acid, nor solutions of cyanide of potassium, had any effect upon the stains. A complete cure was discovered by employing a thick glass-bottomed tray, with a shellac-varnished wooden frame, by flattening and squeegeeing the wet aristo prints down upon the glass, allowing them to remain for twenty minutes before removal, and washing. Not a single print of any size has shown any signs of yellow stain since this simple plan has been adopted.

Another good point about the use of a glass-bottom tray is that it can be seen at once whether it is clean or not; while glass being non-absorbent, there is no possibility of such a tray becoming contaminated. This class of tray answers a double purpose—one side is employed to flatten the prints upon before toning, etc., the other side is used to flatten the prints upon before pasting and mounting. And being kept for these two operations only there is no fear of trouble of the kind hitherto experienced, the prints being as perfect and pure in the whites as it is possible to make them.

The endeavor to rush these large prints through with trays that were entirely unsuited was only successful as far as the good prints were concerned; the loss upon these large prints was considerable, because the yellowing effect is not noticeable until the prints are placed in the hypo. The result of hastening the work through with the various gelatine printing-out papers is not so manifest until a few months after their production.

One of the substances used to aid in hardening the gelatine film, after the toning and fixing operations, is the free use of an alum bath. This is satisfactory only when used after the prints have received several washings. If the prints have received only, say, one rinsing from the hypo solution, and are placed directly into an alum bath, the effect of hardening will be just the same, but there is a compound formed with

the hyposulphite of silver (which still remains in the print) that will sooner or later cause complete fading all over the print. Much of the rush work made upon gelatine paper only two or three years ago will show today only the ghost of an image. First of all the image becomes much weaker, then a gradual pale-green tint pervades the surface, and, lastly, the image will gradually disappear; and this will occur whether the print is mounted or not, so that the fading is not due to the mountant. It is better not to employ alum solutions for such paper if it is desired to secure a print to be as permanent as possible.

Carbon prints have shown many times an unusual deterioration of the whites, a fault which is entirely due to a trace of bichromate of potash being left in the gelatine film; this by long exposure to light and air is transformed into a minute quantity of oxide of chromium, brought about through imperfect manipulation or a want of correct knowledge of carbon printing, and at times through having to get a print delivered on time for commercial requirements. In any case, the rushing of photographic work, for the sake of turning so much within a certain time, will eventually tell upon the photographer's reputation, and, although it may answer for a time, it will eventually injure him in his business. Competition will sometimes bring the rushing of work into vogue, but the photographer whose work withstands the test of time will be progressing in his business when his rushing competitor has worked himself entirely out of the domain of honest photography. The rushing of work in a photographic establishment is only too often the starting point for scamping the various operations generally with the younger members of the work-rooms, the impression being accepted, that if the operations may be cut short in one or two instances, that they may as well be cut short at other times, and this is actually what takes place and at every available apportunity it is put into practice. But these inside practices will eventually injure the photographer's reputation. A good reputation can only be maintained by honest work, gentlemanly bearing, and the fact that the work that is turned out can be depended upon, not only for punctuality, as regards the promise of work, but upon the reliability of the product, and especially if the work is somewhat above the average. Such a reputation will mean money and a further business increase.

The rushing of work, in many cases, means the acceptance of an inferior position, because the result of unreliable work has compelled the photographer to accept a certain groove from which he may not easily recover. "Whatever is worth doing at all is worth doing well," applies with considerable force to the photographer who wishes to create and maintain a good reputation. The hurrying of work so as to get it out of hand does not aid the photographer to this end, and the less there is done of the hurry and rush work, the more certain will be the reward of a reliable reputation.

Midair Photography.—A projectile to take photographs, and claimed to have been successful at heights up to half a mile, is the idea of Herr Marie, a German photographer. A camera, having the form of the usual almost conical shell, is thrown into the air by means of a kind of trap. At a predetermined angle, as the camera turns to make its descent, and is pointed slightly downward, the shutter is automatically released, and a picture is taken of a broad expanse of country. In still air the flight and spot at which the aërial camera will fall can be calculated with much precision.

BROMIDE ENLARGING DIFFICULTIES.

BY C. WINTHROPE SOMERVILLE, F.R.P.S.

ENLARGING onto bromide paper is one of the simplest of photographic processes, involving no complex manipulation of apparatus or materials once they are in proper working order.

Until some experience has been acquired by actual practice, points or incidents may arise and cause trouble or delay if the explanation is not forthcoming. It is with the view of elucidating the cause of some of the more probable difficulties which may occur that we propose to consider them here in some detail.

Excepting the question of illumination, practically all the points raised will apply equally to both daylight and artificial light work.

With regard to daylight enlarging, it might be as well to point out here the essential difference between it and the artificial light method.

Generally speaking, daylight work is not nearly so convenient and simple, owing, in the first place, to the inconstancy of the light, and, secondly, to the impossibility of recording exposure for duplicating purposes.

It is quite possible that the trial exposure for an enlargement and the actual exposure will be vastly different, owing to an alteration in the value of the light between the two periods, and this has been the cause of many disappointments.

For this reason the printing-in of clouds and other forms of combination printing are attended by much uncertainty in daylight work.

It has been stated that richer results are to be obtained by daylight illumination than by artificial light. *This is not a fact.* The whole question is entirely dependent on the quality of the negative, and the elucidation of this important point has, in our experience, been the means of dispelling much disappointment.

The Negative. It will be readily admitted that the quality of the print is highest with the most perfect negative for the effect desired; it follows that the particular quality of negative required is a pre-ordained accomplishment or intent. In other words, the best results are obtained from a negative made for the process, as is the case with all printing processes.

Much difficulty has arisen through that ancient and thoughtless axiom that a negative for bromide enlarging purposes should be thin and full of detail.

That it should be full of detail is very obvious, unless for any special purpose it is required otherwise. But thin! What is thin? Did the writers of that ancient saw enclose a sample negative for every form of illuminant?

For anyone to attempt to describe the quality of negative required for enlarging is absurd, since it is dependent on the illuminant and subject.

On the other hand, those who have had an all-round experience may be able to suggest a guiding principle.

At one time the author had occasion to make some rough experiments to ascertain the comparative densities required in the negative for the various forms of illuminants, and they were based on the penetrative power through the highest light on the assumption that visible gradation will always be required through that part of the negative. The comparative values were as follows, the figures indicating the number of seconds required to penetrate a given opacity:

Daylight, 10: incandescent gas, 22; electric arc, 40; acetylene, 43; flat-flame gas, 65; oil, 70.

It must be understood that the figures are approximate, and will vary with different densities and different colors of deposit.

The main point is that with a certain form of illuminant a certain quality of negative may be secured to give equally good results as any other negative which happens to be suitable for daylight.

Scientifically it depends on the fact that by the time a visible image is produced through the highest light in the negative, the exposure has been sufficient to produce the best result (or otherwise) in the shadow depth; the print, of course, being developed to infinity, a question we shall deal with presently.

The color of the negative is a frequent cause of trouble. Negatives developed with all sorts and conditions of developers will give varying qualities of prints.

It cannot be stated definitely that any one developer will produce a more suitable negative than another, as so much depends on the subject, but a few instances may serve as a general guide.

A non-staining developer such as metol-quinol or rodinal will produce the most rapid printing type of negative, owing to the absence of stain in the shadows; a pyro-stained negative is the very reverse.

Now, if we develop an interior subject with pyro and get a considerable amount of stain in the shadows, a softer effect is obtained, since there is the greater proportion of light obstructing stain in the shadow than in the high lights. On the other hand, if we have a seascape and want as much contrast as possible in our print, we should develop the negative with a restrained and non-staining developer to keep the shadows as clear as possible in order to get as much shadow depth as possible by the time the highest light was printed through.

But the quality of the print will vary with different developers and different illuminants, and our advice to beginners, at least, is to keep to the one form of developer generally, and change if desirable only for special subjects.

To return for a moment to the density or strength of a negative for enlarging purposes.

There will be a difference in the gradation between a contact print and an enlargement from the same negative. The gradation of a contact print may be altered by varying the printing distance, but this cannot be done with an enlargement as the position of the light is governed and fixed by the focal length of the condenser and lens.

The light from an enlarging apparatus is generally much more concentrated than that used for contact printing, thus having a tendency to give a harsher result. With too thin a negative the high lights will be penetrated too rapidly to allow of sufficient silver being acted upon in the shadows, resulting in a weak print; on the other hand, if the negative is too dense or plucky to print through the highest light by the time the shadows have received the necessary exposure, we can always over-expose sufficiently to print the highest light and intensify the print by redevelopment.

Our advice, then, is to have no hesitation in making a plucky negative for enlarging, governed, of course, by the subject. Too-rapid exposures when using very thin negatives are a mistake, as one has no control over the printing manipulations.

Uneven illumination is governed by three factors: the illuminant, the condenser, and the lens.

With a daylight apparatus we have only the lens to consider, as the negative will be evenly illuminated. The longer the focal length of the lens the better the illumination of the screen, for the following reason. If the focal length of the lens be very short, it is so close to the negative that the difference in the distances between the lens and the centre and extreme margins of the negative is so great as to produce less illumination at the margins of the image than the centre.

In an artificial light apparatus the same holds good, and in addition we have the focal length of the condenser to consider. The condenser has a definite focal distance for its rays according to the position of the light.

Thus for the most perfect illumination the focus of the condenser through the negative should coincide with the diaphragm of the lens. With an adjustable apparatus this is a simple enough operation. First focus the image to the size required, thus fixing the position of the lens, then, removing the negative, adjust the light until no shadows of patches show on the circle of light on the screen.

If after this the screen is still unevenly illuminated it will be due either to the use of a lens of too short focal length (in which case the lens is unable to pick up the whole of the rays emanating from the condenser), or that the light is not central with the axis of condenser and lens.

It is essential that an imaginary line drawn through the centres of the lens and condenser should coincide with the centre of the illuminant.

It is convenient to remember that the greater the enlargement the nearer will be the lens to the negative, and the farther will be the light from the condenser.

Stops. The value of the lens diaphragms will vary according to the distance of the lens from the screen, so that in stopping down the *f* values will have to be calculated for each size of enlargement.

Thus, if a quarter-plate negative is used with a lens of 5 in. focal length for a 12 x 9 or threefold enlargement, the distance from the screen to the lens will be 20 in., or four times the focal length; therefore a stop marked *f*/6 would really be working at about *f*/24. This is an important point to remember if the trial exposures are made with one stop and the actual exposure with another. The larger the stop the bolder will be the image, too small a stop having a flattening effect.

Sensitive Side of Paper. A word of warning on the subject will not be amiss. Some manufacturers pack their paper by laying or rolling five or eleven sheets emulsion in contact with the plain side and the sixth or twelfth emulsion to emulsion, so as not to have a sensitive surface on the outside of the roll or packet. Others put emulsion side to emulsion side. It is a common mistake to expose on the wrong side of the paper through forgetfulness or ignorance of the above fact; therefore, we always make it a rule when using large sheets to test for the sensitive side by nipping a very small corner of each sheet between the front teeth for a period of five seconds, when the sensitive side will stick to a tooth.

Distortion of image after exposure is due either to the paper cockling during exposure or not being optically flat on the screen, or to the use of glass pressed against the paper to keep it flat.

Paper is generally packed in a dry atmosphere, and as dark rooms usually contain a large amount of moisture the paper rapidly absorbs it and expands in consequence. In the case of paper pinned on a screen, the only remedy is to use it wet by soaking it previous to putting on the screen.

For architectural subjects, or those requiring the sharpest definition, this is the best method of exposing, inasmuch as when the paper is dry the individual lines composing the image contract, thereby reducing the diffusion. With regard to the glass in front of the paper, we do not like the practice as it renders the paper so inaccessible, but where it must be used the thinnest plate should be employed.

Ordinary glass placed at any distance between the lens and screen will produce distortion.

Insensitive or undevelopable spots are produced by air bells or bubbles on the face of the print by careless soaking of the print before development. The following method of soaking the print whereby their formation is impossible is very simple:

It is essential to use plenty of water in the dish. With a flat piece of paper take one edge and push it under; then, putting the finger and thumb under the water, lightly grasp the edge and gently pull the whole sheet under. In this way the water is made to creep evenly up the paper. Once the surface has been wetted you will not get a bubble.

With a rolled sheet let it curl up, and taking the two corners of one edge between finger and thumb put it under water at the farthest end of the dish, allowing the rest of the roll to lie on the water. Now hold the middle of the edge down with a finger, and with the other hand gently unroll the sheet and follow it up with the hand under water, pressing the paper to the bottom the while. When it is all unrolled the paper will probably float to the top, but gentle rocking of the dish will swirl the water all over it.

Dark-room Light. Oh, fruitful cause of mistaken density! Do not, under any consideration or persuasion, use a red light.

If we take a finished print and examine its intensity by the dark-room light and then by day or gaslight, we shall observe that it looks much lighter by day or gaslight. It is obvious, then, that the brighter the light we can use for developing the nearer we get to the white-light conditions of view. One thickness of canary fabric for an oil or flat gas-flame, and two for a brighter form of light, such as incandescent gas, is quite sufficient.

The larger the area of light-emitting surface the better, for a print should never be developed close under the light but as far away as possible, and only occasionally examined closer to the light.

For final inspection the print should be viewed by transmitted light, otherwise if judged by reflected light it will be found too light after fixing, and for the following reason:

During development the image is covered with a surface veil (the nature of this we need not discuss here); on fixing this is dissolved away leaving the tones clearer. If the print be viewed by transmitted light this veil interferes only very slightly with the estimation of the density, which will be that of the fixed print at the stage it is examined.

Development to Infinity. This may be truly said to be the foundation of successful bromide printing. A brief outline of cause and effect will suffice to show how many mistakes and failures are due to ignorance of a simple law in bromide printing.

Such an exposure may be given through a negative to bromide paper that it is possible to develop the print to a limited extent, and however much development may be prolonged, no further reduction will occur.

The ideal negative for any printing process is one from which by the time the highest light (required) is printed

through the shadows have acquired the desired density.

The trial exposures should first be made on the highest light of the projected image and developed to infinity. Having secured the required amount of visible image in the highest light in this way you will know that if the actual print receives the same exposure whatever the strength of the developer, and for however long it may be developed, over-development cannot result. Thus with an ideal negative there is no such thing as snatching a print out of the developer because it may be developed too far.

With a negative which departs from the ideal either way we will still have to print through the highest light, but the shadows will have to be manipulated, and as this means over-exposure in both cases the amount can be ascertained by trial, and weak development employed with modification by bromide as the case may require.

The main point is to find the exposure required for development to infinity (without bromide) which will give the desired amount of reduction in the highest light through which it is required to print, thereby forming a stop or limit to reduction in the actual print; and when over-exposure is given it is done with a definite intention, and its extent and effect previously measured with a normal developer, so that it cannot be exceeded by one of dilute or modified composition.

If the negative is too thin but fully exposed the highest light will be printed through before the shadows have accumulated sufficient density, simply because sufficient exposure has not been given to the shadows to overcome the inertia of enough silver in the emulsion to render it amenable to development and provide the required density.

In this case the shadows control the exposure and the highest light will be over-exposed, an effect easily remedied by using a comparatively heavy dose of bromide from the beginning of development which will keep the least-exposed parts (high lights) back while the shadows attain the required density, and, since the exposure for these is known, they cannot be over-developed; development of the high lights is then continued to the required extent.

But in the case of a negative in which the shadows are over-exposed before the high lights are printed, it means a weak print with muddy shadows (no bromide in developer) and subsequent intensification by re-development, a simple procedure by which a perfectly satisfactory print can be obtained, and similar in chemical composition to an ordinarily developed print.

As this method of intensification is essentially a part of the process, I will give the formula:

Bleach the fixed and washed prints in copper sulphate, 10 grains; potassium bromide, 10 grains; water, 1 ounce. Wash five to ten minutes and apply a 3 per cent. solution of nitric acid for three or four minutes. Again wash for five minutes and re-develop with a normal developer until the shadows are of the required intensity. Development should be continued some five minutes after it is apparently complete to ensure the under silver being completely converted. The print is now washed free from the developer.

It will be seen that the high lights develop first, the shadow following later, so that if the development be stopped at any particular stage and the print put in the fixing bath the silver bromide formed by the bleacher will be dissolved out, leaving a softened or reduced print. This is the best method of reducing a bromide print, but the developer should be used considerably diluted.—*Practical and Pictorial Photographer.*

MERCURIC IODIDE, AN EFFICIENT AND SIMPLE INTENSIFIER.

BY HENRY W. BENNETT.

THE method of intensification by means of mercuric iodide introduced a few years ago by Messrs. Lumière, is one of the most simple and satisfactory methods that an amateur can employ. A greater degree of strengthening can be obtained than that given by any other reliable form of mercurial intensification, and the results are thoroughly permanent. There are, in addition, other advantages which are equally important, and combine to render it a very suitable process for those whose work is more or less intermittent, and who cannot, therefore, attain that degree of proficiency and readiness in working troublesome processes which are only acquired by constant practice.

The operation of building up density by this method of intensification is gradual; the plate can be examined from time to time and withdrawn from the solution as soon as sufficiently strong. If, after drying, it should be found that the strengthening is insufficient, the operation may be repeated, and a further strengthening will result, if the full intensification possible by this means had not been produced in the first instance. A definite proportion of mercury is added to the silver forming the image in the negative by the complete action of this intensifier, and when this amount is deposited no further addition can be made by repetition of the operation. Consequently, if the intensification is carried as far as the solution will permit in the first treatment of a negative, repetition of the work will not give any further increase of strength.

Negatives must be very thoroughly fixed, or intensification can never be carried out successfully. Thorough washing after fixing is very desirable, but not nearly so important as thorough fixation. Negatives should be allowed to remain in the fixing bath at least twice as long as the time necessary for clearing the opalescence that forms the characteristic appearance of an unfixed plate. A little longer time than this is desirable. Nearly all the troubles that arise in the after-treatment of photographic negatives are due to imperfect fixing in the first instance. An imperfectly fixed negative, though it may appear quite clean and clear, will invariably be stained badly by mercurial intensification.

The mercuric iodide intensifier is easily prepared, though it will not keep in the form of a solution. And, unfortunately, neither of the substances employed can be kept in stock solutions.

A good formula for ordinary working is:

Mercuric iodide	1 grain.
Sodium sulphite (crystals)	20 grains.
Water	1 ounce.

The sodium sulphite must be dissolved first, and warm water may be used to facilitate solution. When the sulphite is thoroughly dissolved the mercuric iodide should be added and the solution stirred. Mercuric iodide is a bright red powder, insoluble in water, but it dissolves very readily in the sulphite solution if it is agitated with a glass stirring rod, and produces a cloudy, yellow-colored fluid which is the intensifying solution.

For those who prefer to avoid weighing small quantities of chemicals in their photographic work, this intensifier has been put on the market in a very convenient form. It is included in the "Tabloid" preparations, and for convenience in working I have frequently used these "Tabloids," and the

result has been quite as satisfactory as when making up the intensifier from the stock chemicals. To retain their efficiency perfectly, the "Tabloids" must be kept in their tube or a bottle, well corked and protected from the air. To prepare the intensifying solution one "Tabloid" should be crushed and dissolved in two ounces of water. This will produce a working solution similar to that prepared by the formula given.

The negative is placed in the solution, the dish being rocked occasionally to ensure even action.

The negative should be examined from time to time, and when sufficiently strong it should be taken from the solution. The strength of the plate is not modified by after-treatment; the effect produced by the mercury solution is the final result, so far as intensification is concerned. The action of the solution is progressive and proportionate, so that any degree of strengthening may be secured at will, up to the maximum that this intensifier will yield. The maximum effect is obtained in a solution of this strength in from eight to ten minutes at a temperature of 65°.

When taken from the mercuric iodide solution, the negative must be washed in several changes of water and in two or three weak acid baths, and again in two or three changes of water. The acid baths consist of one dram of hydrochloric acid in about ten ounces of water; the object of these baths being to prevent the mercury in the solution from combining with the gelatine of the plate. It is desirable, though not absolutely necessary, to gently rub the entire surface of the plate with a tuft of cotton-wool, while it is in one of the last washing waters.

The plate must then be re-developed. Any developer may be employed excepting ferrous oxalate. The plate must remain in the developer until the yellowish-brown color produced by the mercury solution is changed into a good black. With some plates very little change of color is visible, though as the plate lies in the dish the thinner portions will generally show the yellow-brown color strongly. The sky or dense parts will most frequently show it from the back of the plate. Rather less time than would be necessary for the development of a landscape negative in a similar solution will be sufficient for the treatment of a plate in the developer. Washing in several changes of water for about fifteen minutes completes the operation.

It is quite immaterial what developer is used after the mercury solution, provided that it contains sufficient sulphite to prevent staining. The developer that was used for the production of the negative may be employed, or any other may be substituted; the result will be the same. Two negatives were made specially to test this point. One was developed with pyro and soda, the other with dianol, a developer almost identical with amidol, and used in a similar manner. The pyro-soda negative was brown-black, the dianol plate was blue-black. Both plates were cut into strips and the strips treated with the mercuric iodide solution. After the usual washing the strips were re-developed, pieces from each negative being developed with pyro-soda, ortol-soda, and dianol, respectively. All the strips from each negative were identical in density after development. The pieces of the plate originally developed with dianol were a cold, black color, the pyro-developed strip being slightly warmer than the others. All the strips of the negative that had been developed in the first instance with pyro-soda were a brown-black; but the strip that had been re-developed with pyro-soda was decidedly browner in color than the others. The warmer color would slightly prolong printing, and might,

in some cases, give a little greater printing value, but the difference would be very slight. Any photographer using this form of intensification may always employ his favorite developer and be satisfied that he is getting the best result.

This intensifier is exceedingly simple in use, it strengthens all portions of the scale in the same proportion, and enables the worker to secure either a considerable increase in strength, or only a moderate intensification, with equal facility. There is one caution necessary: Mercuric iodide is an exceedingly poisonous salt; it must be used and stored with the greatest possible care.—*Focus.*

GASLIGHT PRINTING FOR BEGINNERS.

BY E. C. CRIPPS.

[THE following remarks on gaslight papers will interest those of our readers who have not yet experimented with papers of this class. We cannot endorse too strongly Mr. Cripps' advice that the best developer to use is the one recommended by the makers of the paper. It is manifestly unfair to the manufacturer that his product should be condemned if it fails to give perfect results with a developer other than the one specified.—ED. W. P. M.]

From a long and varied experience of amateurs, especially young ones, I have come to the conclusion that they do not value the boon and blessing conferred upon them by the introduction of those papers called by the generic name of "gaslight." There is a hesitancy about their promise to try it, and a desire to stick to the ills they know, in the shape of the ordinary P.O.P., rather than fly to those they do not know or understand in gaslight paper. This arises from one or two causes. Probably they have been told by friends that the newer method is too much trouble, or not easy to work, or they *have* tried it themselves, perfunctorily perhaps, have not succeeded at first, and so have given up the task in disgust. Gaslight printing and developing is an easy matter: not so easy perhaps as P.O.P.; but there are certain difficulties to overcome, and facts to realize, before one can become an expert, which I will endeavor to put before readers of this paper.

No worker can hope to get good all-round results with one *speed* of gaslight paper only. Suppose he is in the habit of working with one make or grade, possibly a slow one. With this, flat negatives, and somewhat shortened exposures, good hard, contrasty prints can be obtained, quite impossible with the same negative and P.O.P.; but it will be obvious that the same paper is quite unsuitable for a plucky, brilliant negative with gradations ranging from clear glass in the shadows to delicate half-tones in the high lights. If a print is obtained from this with normal exposure, difficulty will be experienced in getting out the half-tones, if they show at all. Longer exposure to attain this end will choke up the detail of the correctly exposed parts, and the result will be a print to which the expression "hard" is too mild a term to apply.

Now if a faster speed of paper is used—and most makers now supply the two varieties—and a fairly quick exposure given, the gradations will each receive their correct exposure, and the result will be artistic and pleasing. Oc-

casionally one gets a negative too hard for a fast gaslight paper, and a bromide paper has to be used to give a good print; but this is a somewhat rare occurrence.

As to *exposure and printing* generally, I have tried both gaslight and subdued daylight, and found both satisfactory. I much prefer a weak evening light for quick exposure, as five seconds to a southern sky is ample for all but the denser negatives. Development in this case can be carried on in a darkened room, or behind a screen or other protection from the direct rays of light.

Gas can be used with more certainty of getting uniform results, as the light from the sky varies from time to time. An ordinary incandescent burner with opal globe is the best and quickest illuminant, and development may be carried on by the light of the same if a card is used to screen off the more direct rays. Magnesium ribbon is recommended by some, and for uniformity is certainly to be commended. Unfortunately the white "smoke" it produces soon makes the room unbearable, and, although it may be a very economical method of taking a dose of "magnesia" by inhaling it, it is anything but pleasant to the eyes and nose.

The *time* of exposure varies, of course, with the different makes of paper, ranging from five seconds to two or three minutes with gas; and it is a good idea to mark on the outside of the negative envelope the number of seconds required at, say, a foot distance. Be careful to keep the frame moving, or unequal printing will probably result. One of the great factors of success in gaslight work is correct printing, and after a little experience the worker will be able by looking at his negative to tell to a second how much exposure it will require and what speed of paper to use.

Developing is a great stumbling block to many, and yet it is simplicity itself. The developer should be any suitable form recommended by the makers. Personally, I pin my faith to metol-hydrokinone. It must be freshly mixed, and must not contain more than the stated quantity of bromide of potassium. This is a most important point, as I have worked with some makes of paper on the market so sensitive that ½ gr. of bromide in 10 oz. makes all the difference between a pure-black tone and a greenish-black one. If you make up your own developer, be careful that the crystallized carbonate of soda is not the common washing variety. Quite recently I spoiled several batches of prints through ordinary washing soda contaminated with iron being used. Ask for the recrystallized form, and see that you get it.

Do not use the same bath for a quantity of prints, but renew it frequently. The cause of rusty blacks is generally the result of the developer becoming exhausted, by reason of too many prints passing through it. It is also important that the paper should be plunged under the developer in one sweep. If not, irregular markings will make their appearance. Keep also a bright lookout for air-bubbles, which specially make their appearance on matt paper. See that developer is not too cold, and in winter it is preferable to use warm water in dissolving the salts.

Fixing should be a simple process, and yet most of the spots and stains make their appearance during this operation. My panacea for most, if not all, of these is the acid fixing bath, and it will prevent most of the markings to which gaslight paper is so liable.

By instantly neutralizing the alkali in the developer, it prevents brown patches, due to its continued action in the fixing solution, and the prints can be placed in the acid bath without further movement. Too long fixing must be avoided, or slight reduction of the

prints takes place. The presence also of free sulphur must be provided against, as this seems to exercise a toning action on the prints, and gives distinctly brown tones. The following formula can be thoroughly recommended for the fixing bath:

Hyposulphite of sodium	5 ounces.
Sulphite of soda.....	½ ounce.
Glacial acetic acid.....	1 dram.
Water	to a pint.

Dissolve in the order given. This can be used repeatedly until exhausted.

A most important point to remember, and one which is apt to be overlooked, is to wipe or wash the hands thoroughly between the operations of developing and fixing, and putting fresh paper in the printing frame. Especially must this be done when one is working single-handed, and when all the operations have to be performed by one pair of hands. The method I adopt when working by myself is, after ascertaining the correct exposure, to print all the papers required and to place them in a box or under a suitable covering. The prints can then be taken one by one with the right hand and thrust under the developer, and transferred to the left hand, which is kept only for the fixing. Many of the gaslight worker's troubles can be traced to the neglect of the rule of thorough cleanliness, and workers will often find that the source of mysterious spots or stains, for which a cause has been long and patiently searched, will be found to be insufficient washing of the hands between each operation.

As regards *surface markings* which appear on glossy paper: These, of course, can be removed by rubbing the finished print with Columbian spirit when dry; but to a great extent they may be prevented by abstaining from rubbing or using any friction to the cards as they are separated one from another in the packet.

The question of thoroughly washing after fixing, always an important one, becomes more so if the papers are to be toned by the sulphide bath. It was my misfortune recently to spoil several prints, which completely vanished, or rather the image did, in the bleaching solution of the sepia-toning process, or disappeared in patches. A little reflection led me to the conclusion that hypo left in the prints, through incomplete washing, had formed with the ferridcyanide of potassium a reducing agent which had caused all the trouble. —*Amateur Photographer.*

A REPLY TO SIDNEY ALLAN'S CRITICISM.

EDITOR, WILSON'S PHOTOGRAPHIC MAGAZINE.

DEAR SIR: If permissible, I would like to say a few words in response to an article by Sidney Allan, in your journal of July, in which, in his criticism of Otto Beck's book, *Art Principles in Portrait Photography*, he quotes Beck thus: "Having produced the negative we have a likeness and now proceed to make a portrait," or words to this effect. I am not a champion of Beck's methods, but a pure lover of photographic art.

Allan says, to accomplish this 80 per cent. of the photographers would have to go out of business or go to an art school.

That's it. That's it. Let 'em go out of business or continue the business as a trade if they can; but if they would be professionals, let 'em go to an art school. Photography has too long been a trade. Any common, uneducated

laborer with a few hundred dollars and a week's tuition can fit himself to do work equal to one-half of that produced in this country. Anything that will deliver to an uneducated public has been the keynote of effort. There is of late an awakening to this fact. Let the intelligent and ambitious class advance; let them go to an art class or study at home and make photography a profession if not an art. I am sorry if the criticism was in ridicule of this idea, coming from so eminent a man as Sidney Allan.

He cannot object to treatment with chemicals or tools so long as the negative prints the effect desired.

Retouching to beautify the face has ever been allowed, and a dark-room man is qualified by the manipulation of chemicals. It is not considered improper or unprofessional for the one developing to hurry the dark-skinned sitter's flesh with white clothes by touching the flesh during development with a little extra strong developer. That is a part of the art in the business, and when did we object to the printer using all manner of devices to produce the best effect? If the printer can overcome what the operater cannot, then he's the artist.

No one has ever thought of objecting to a sculptor employing an assistant to do the rough work, and in painting one is allowed to use a rag, a finger, or any old tool to produce the effect; but as long as the result can be obtained by the negative it is still pure photography and can be made an art.

Respectfully,

C. F. FAGIN,
With Knaffl & Bro., Knoxville, Tenn.

Developer for Bromide Prints. That amidol stands very high in the favor of bromide workers is an undoubted fact. This is probably due to the following reasons: Very rich blacks are obtainable with it (provided the proper amount of exposure has been given), the formula for compounding the developer is extremely simple, and the solution may be made up almost instantly. It does not, however, keep well in solution. A recognized formula is:

Water	20 ounces.
Sodium sulphite	650 grains.
Potassium bromide	10 grains.
Amidol	50 grains.

The ingredients should be added to the water in the order given, and used in twenty-four hours.

A Damp-proof Glue.—Dissolve common glue in the smallest possible quantity of water, and while hot add one-quarter its bulk of linseed oil, stirring rapidly during the addition.

TRADE NOTES.

TANK DEVELOPMENT is proving itself to be the best for the professional—it has long been shown to be the best method for the kodaker. We have been experimenting with one of the Eagle Adjustable Developing Tanks and are quite convinced that for simplicity of operation, quality of resulting negatives, and saving in time effected the tank will soon oust the developing tray from the dark-room.

Mr. C. H. Claudy clearly demonstrated in our May issue that the tank had very decided advantages over the tray, and we are sure that every professional photographer who gives the Eagle Adjustable Tank a trial will agree with him. The tank is made in two styles and various sizes—the zinc tank being intended for developing only; the nickle-plated tank can be used for both developing and fixing. The tanks are made in various sizes, each size being adjustable for as many as four different-sized plates, the sizes ranging from 3¼ x 4¼ to 8 x 10. Details of sizes and prices will be found in our advertising pages.

THE EASTMAN KODAK CO., pioneers in all that pertains to the advancement of photography, have just issued a booklet entitled *Developing and Printing for the Amateur*. It has been published for the benefit of all who do such work, and they will be glad to send a copy to any photographer who does developing for the amateur. It is wonderfully well illustrated and shows in a very graphic manner the methods of developing and finishing in vogue at the model factory of the kodak works. It is a very complete story of how "We do the rest." The thoroughness with which the most minute details are carried out in part explains the success of the Eastman Company in having such a tremendous following of satisfied customers. Photographers who develop for the amateur should not fail to write for a copy—it is full of useful hints and ideas.

A NEW PHOTOGRAPHIC SUPPLY HOUSE.—Mr. J. A. Hoerter, for the past seven years associated with Messrs. Burke & James, Chicago, has severed his connection with that firm and established himself at Louisville, Ky., under the firm-name of Hoerter Supply Co., handling a general line of photographic supplies, finishing for the amateur, etc.

Mr. Hoerter has been identified with the photographic trade, both as office and road salesman, for the past twenty-two years, which will count for a great deal in the new venture, and which will, no doubt, prove to be a well-patronized establishment by the photographic trade in that section of the country.

ANSCO COMPANY is the new name of the Anthony & Scovill Co., and, as is readily seen, is an abbreviation of this corporate title. The new company will have the advantage of the present management and personnel, and preparations are being made to considerably enlarge their present manufacturing facilities to meet the greatly increased demand for their specialties.

PROFESSIONAL CYKO.—This paper is being talked about a great deal because it fills up a gap which has hitherto made it impossible for the professional photographer to use developing-out paper in all his work. It is apparent from the inquiries received by the manufacturers that the dealer does not know what Professional Cyko really is and what is expected of it. For instance, they receive requests for sample prints on Professional Cyko, whereas, as a matter of fact, a print on Professional Cyko does not differ from the regular Blue and Yellow Label Cyko, unless the prints consist of comparative tests from the same negative. If a photographer makes his negatives according to what is required to produce good prints on developing-out paper, he need not trouble himself about Professional Cyko as the regular Yellow Label will yield all there is in the negative. It is only the photographer who makes his negatives to suit platinum paper, and exacts as good or better prints from the said negatives on developing-out paper, who is interested in Professional Cyko, as no other grade will accomplish that difficult feat. The Professional Cyko emulsion is compounded so as to produce great softness with contrasty negatives without sacrificing brilliancy. Some papers give the impression of softness, but in reality it is flatness—not softness.

A question which invariably suggests itself to the dealer is, Why should Professional Cyko cost more than the regular Blue and Yellow Labels? The reason may not be obvious, but the manufacturers announce that it is based on facts. The emulsion has more silver; it contains more gelatine. A slight variation in temperature, as well as in a great many other details not always under precise control, unfits the emulsion for Professional Cyko, and if it does not come up to the standard of softness and tonal gradation, it must be discarded at a sacrifice of the money which it cost to produce.

ENSIGN FILM, the well-known English rollable film for hand-cameras, manufactured by Austin Edwards, of Warwick, has been placed on the American market by G. Gennert, of New York, who asks us to state that he can place them with the trade at specially advantageous rates. The film sells at the usual American prices. It is non-curlable, has great speed, and while giving full contrast has excellent middle-tones. We will record our experiences with the film in a later issue.

THE FOLMER & SCHWING CO., Rochester, N. Y., have just issued a very handsome catalogue describing their famous line of Graflex Cameras. The illustrations include portraits by Alfred Stieglitz. The professional photographer will be especially interested in the examples of child portraiture shown, and for which the camera has special adaptabiliy. Copies will be sent upon request.

ARTURA IRIS.—Photographers who are not acquainted with this well-known developing paper would do well to get to know its good qualities. We recently made a considerable number of prints from a variety of negatives and were more than satisfied with the results obtained. The paper has great latitude and can be made to give splendid results with various kinds of negatives, yielding good blacks and whites with plenty of gradation. The gradual manner in which the image develops makes its operation simple and economical. Not daring to use the metol formula given in the instructions we went ahead with rodinal and could not have wished for better prints than those we secured. The Artura Company will be glad to tell you more about its good qualities.

EDITOR'S TABLE.

MR. MEREDITH JANVIER, of Baltimore, some of whose work we have pleasure in reproducing in this issue, has just returned from a two months' trip to London and Paris. While in the latter city he saw that Cincinnati-American, Mr. Isaac Benjamin, who has established a very handsome studio there and is doing a good business.

Mr. Janvier is making extensive alterations in his Baltimore studio and will use the entire four floors of the building for portraiture. He reports that the outlook for work is the best since he started in business. It is interesting to note that his prices range from thirty to seventy-five dollars a dozen.

THE examples of outdoor portraiture with natural backgrounds given in this issue are from portraits by H. F. Walbridge, of Pittsburg. In submitting the work Mr. Walbridge writes: "'Line-lighting' may be done very effectively out-of-doors and equally as well as under the best arranged studio light. Would call your attention to several of the profiles in which you will notice a line of light running just on the edge of the face, being completely relieved from the background and the shadow side of the face. It is all done without the aid of a single accessory or screen, but simply by adjustment of the figure in relation to the direction of light and the selection of a suitable background."

Mr. Walbridge's outdoor backgrounds can only be used, of course, in the smaller cities where the trees are to be found. The Fifth Avenue studio would have to travel many miles before it reached a belt of trees of the size shown in Mr. Walbridge's pictures.

QUITE a novel competition has been arranged by the committee of the Dresden International Photographic Exhibition of 1909. In order to obtain a unique artistic *poster*, painters and photographers are mutually to compete. For once this competition will solve the so-long-discussed question, if *photograhpic* art really can successfully enter competition of such a task with *plastic* art. Art circles will be intensely interested in the solution, especially as the prizes of $750 (first prize $250) assure the competition of first-class artists of both professions. Particulars can be had gratis on application to the offices of the Exhibition (Newmarket No. 1, Dresden, Germany).

MR. WILLIAM HARDY KENT, who was regarded as the oldest photographer in the world, died at Eastbourne on Sunday, aged eighty-eight years. He spent his early years in New Bedford, Massachusetts. Five or seven years after Daguerre's invention Mr. Kent learned the art of photography, and in 1848 he opened his first studio in New York.

So great was his success that after realizing a small fortune he returned to England in 1854 and opened three London studios—one in Oxford Street, one in Regent Street, and the other at Knightsbridge. He had an intimate knowledge of the improvements successively introduced into photography, but for a time devoted his attention to a manufacturing business. A change in fashion induced him to return to his first occupation, and in 1878 he opened a business in Eastbourne. At the time of his death he was also interested in businesses at Brighton, Hastings, Newcastle, and Harrogate. He retained his mental faculties to the last, and only recently manifested a deep interest in a new method of photographic portraiture.

THE final jury on choice of pictures to be hung in the fourth American Photographic Salon held its second sitting and completed its work on Friday. Two hundred and thirty-nine pictures from the United States, Canada, England, Germany, Italy, Mexico, Hawaii, and India were chosen from a vast number submitted.

It is said that there are a few pictures which are even better than anything which appeared in last year's Salon, and that the general average is slightly higher. The Salon will open the season under the auspices of the Pen, Pencil, and Camera Club of Pittsburg, November 3 to 18, after which it will start on its itinerary to the principal cities of the country.

WE are in receipt of the illustrated catalogue of the Fifty-second Annual Exhibition of the Royal Photographic Society of Great Britain, which has just closed in London. It is remarkable for two things: First, the small number of entries in the professional section, there being only three—William Crooke, Edinboro; Frederic Hollyer, and Franz Hanfstaengl, London—the last two showing reproductions of paintings only. The second point about the exhibition that we thought remarkable was the very high prices asked for pictures by the "pictorialists." For a portrait of "Ike Marvel" by A. E. Eldridge, $75 was asked; "Moses Melchoir, Esq.," by Oscar Hardee, $52; "Master R," by Carle Semon (Cleveland, Ohio) $25, and "Bernard Shaw," by E. M. Treble, for $17. And so they ran—the simplest kind of a picture selling for nothing less than $5. The professional photographer is glad to get these prices for dozen lots even in times of unparalleled prosperity.

As we go to press we learn of the destruction by fire of M. Miley & Son's photographic studio at Lexington, Va. The loss included an extensive collection of fine historical portraits of Confederate celebrities. Mr. Miley's loss is put at $4500, and we are sorry to see that the insurance carried covers less than $1000. Within a few hours of the fire, rooms were being fixed up for portraiture on the opposite side of the street, where we hope Mr. Miley will soon recover his losses.

A FRANZ HALS TYPE

By Elizabeth Flint Wade and Rose Clark, Buffalo, N Y.

WILSON'S PHOTOGRAPHIC MAGAZINE.

FOUNDED BY EDWARD L. WILSON.
MRS. EDWARD L. WILSON, EDITOR.
T. DIXON TENNANT, ASSOCIATE EDITOR.

VOL. XLIV DECEMBER, 1907 No. 612

A PLEA FOR MORE VARIETY.

BY THE ASSOCIATE EDITOR.

WE recently had an opportunity of glancing over a large collection of photographs, representing most of the best-known workers in this country, and could not help but notice the great similarity of the different prints from any one studio.

In turning the pictures over it was not at all difficult to name the maker of every print after the most superficial glance. The subjects might be as varied as the patterns in a crazy-work quilt, but they were so handled that "Brown," "Jones," or "Smith" fell from your lips as fast as the prints were exposed to view.

Taken altogether they were a magnificent lot of photographs and would do much to advance photography's claim to being one of the fine arts. What we are complaining about is that no one man was capable of showing anything like the range of work gathered from the different studios. There is no reason why he should not be able to make with his camera what has been made with the camera of another.

The habit of working by formulæ is easily contracted. It is so easy to have a definite pose and lighting for each and every sitter: To place them just so; step back; make an exposure or two; then another pose that has been used thousands of times before; another exposure, and the trick is done—very much like the egg is made to disappear three times a day by the vaudeville conjurer.

Individuality and the accentuation of the personal note are all very well, but can be carried too far. A photographer can get into a rut more easily than he can get out, and he unconsciously repeats himself thousands of times before he realizes that repetition is not individuality.

The most noticeable feature of the very choice collection of foreign photographs exhibited at the Dayton and New England Conventions was the great variety of work from any single studio. A glance at the reproductions of Herr Dührkoop's splendid work in our October issue will convey the idea better than we can write it.

We hope the American photographer with his reputation for originality, inventiveness, and ready adaptability, will assert himself and show by his work that he is capable of producing portraiture by more than one or two hackneyed methods.

LUMIÈRE AUTOCHROME PHOTOGRAPHY.

[THE announcement that the new Autochrome plates are obtainable in this country will create new interest in this wonderful process, and many of our readers will doubtless want to give it a trial. As the cost of a dozen 5 x 7 plates, with necessary screen and chemicals, runs from eighteen to twenty dollars, a clear understanding of the methods of manipulation is desirable. The following notes are compiled from *Real Color Photography* by the editor of *Photography*, a pamphlet giving the latest and best information on the process up to date. It is handled on this side by Tennant & Ward, 287 Fourth Ave., New York. Price, 50 cents.—Ed. W. P. M.]

Necessary Solutions.

The solutions required are ten in number, they are simple in character, easily prepared, and in most cases call for no skill whatever in their use. In addition to the necessary solutions nothing is wanted beyond a supply of the Autochrome plates and a special color-screen, which is made and sold at a very reasonable price.

The color-screen being fitted to the lens the plate is exposed with its *glass* side to the lens. It is developed, but instead of being fixed is placed in a solution which turns it from a negative into a positive. As soon as it is in this solution it may be taken out into the light and the colors already make their appearance; a few further operations brighten these up, and it is finally fixed for two minutes and washed for five minutes, giving within half an hour of starting development the complete finished color picture. Such is the process in outline.

Alternate Formulæ.

The following are the actual solutions used by the great majority of the English workers, and have been found in every way perfectly satisfactory. These are more than a mere translation, as we have substituted for some chemicals on the French market, but not conveniently obtainable from any dealer here, others which are obtainable from any dealer. The quantities named in each case are what we recommend to be made up to start with, and we have headed each formula with MM. Lumière's descriptive title and letter:

A and B.—First Development.

A.

Spirits of wine (not methylated spirit)	10 ounces.
Pyro	160 grains.

B.

Water	8 ounces.
Liq. ammonia fort. (nominally .880)	135 grains.

C.—*Reversal.*

Potassium permanganate	1 dram.
Water	80 ounces.
Strong sulphuric acid	5 drams.

D.—*Second Development.*

Amidol	2½ grains
Sodium sulphite (crystals)	15 grains.
Water	1 ounce.

As this solution keeps very badly, the composition per ounce is given, and the worker is advised not to make up more than he expects he can use in two or three days at most.

E.—Oxidation.

This solution is made by taking three drams of C. and diluting it with water to make 1 pint.

F and G.—*Intensification.*

F.

Citric acid	26 grains.
Water	20 ounces.
Pyro	26 grains.

G.

Distilled water	2 ounces.
Silver nitrate	50 grains.

H.—Clearing.

Half a dram of potassium permanganate dissolved in 80 ounces of water. This formula originally published gave one dram of permanganate, the same strength as the C solution; as a matter of fact the exact strength of this clearing bath is unimportant.

I.—*Fixing.*

Hypo	6 ounces.
Potassium metabisulphite	80 grains.
Water	40 ounces.

J.—*Varnishing.*

Pure benzole	5 ounces.
Gum dammar	1 ounce.

Making up the Solutions.

The two solutions C and H are so much alike in appearance that it is a wise precaution to keep them in bottles of totally distinct shape. Little harm might follow the application of H in place of C, but if the opposite error were made the picture would be spoiled before anything could be done. The sulphuric acid should be added after the permanganate has dissolved; and in the same way, in making up F, the citric acid should be dissolved before adding the pyro.

The developer as applied to the plate is made by taking half an ounce of A and B and five ounces of water. Plenty should be used—this quantity is none too much for a 5 x 7 plate—as the operation is done practically in the dark. The water should be mixed with B, and A should not be added until a moment before use, as the solution discolors very rapidly. For intensification, half an ounce of G is added to five ounces of F, and in this case also the mixture should not be made until the solution is wanted.

The Varnish.

The varnish is the most messy solution to prepare, and if possible should be bought ready made. A word of caution may be given as to its use. The solvent benzine gives off a most inflammable vapor, and the varnishing should not be done in a room where there is a naked light. If the varnish is to be made, and it presents no difficulty, the dammar should be crushed by hammering while in the paper. It will dissolve in the benzine at once; but, as the commercial dammar is dirty, the solution will be dirty and must be filtered through a plug of cotton pushed into the end of a cone. After filtering it will still be cloudy, but may be used in this condition; or, better still, put to one side where it will be quite undisturbed for a week. At the end of that time the upper part of the liquid will be water white, and may be carefully decanted from the rest. The quantity of benzine in the varnish may be increased to double that in the formula. This makes a varnish which is much easier to apply and which dries very quickly.

A few words might be added as to the keeping qualities of the different solutions. We may add that, except in the case of D (the amidol developer), they all keep fairly well, and some, the permanganate baths, for example, would keep indefinitely. The pyro and citric acid (F) would go off in time, but some which we made up more than a month ago (with crystallized pyro) is still in good working order and only faintly tinged with yellow. A and B keep very well and G and H indefinitely.

Exposure.

Although the emulsion is extremely sensitive to light, the plates need a comparatively long exposure; that is to say, that a very little light will fog them, but a good deal is needed, reaching them in the legitimate way through the glass, to give the picture in its natural colors. The makers say that in good bright sunshine a landscape with *f*/8 requires one second exposure; six seconds are needed if the weather is cloudy. Few people are likely to expose their first plates on landscape subjects, but will select a bunch of flowers or some other still-life readily attainable, and the problem of exposure is to be faced. It is all the more serious because it is the only problem in the whole process; everything else is quite automatic. The photographer has got to face this fact, that with these plates he must, in his own interest, use an exposure meter. There are two well-known patterns on the market, the Watkins and the Wynne, and either can be employed. As the first subject is a still-life subject there is a very simple way of ascertaining the correct exposure. The meter must be placed at the subject itself, so that the light, falling on the subject, falls also at a very similar angle on the meter paper. The time taken for this paper to darken to the standard tint is noted, and this time with still-life subjects indoors is approximately the correct exposure with *f*/8.

The photographer ought to be cautioned against assuming that his stops are working at what they are marked. If his camera is fairly near the object, as it is nearly sure to be in the case of a still-life picture, it will be considerably extended, and the stop that is nominally *f*/8 may actually be *f*/11 or more. Should the first subject be an outdoor one, the exposure may be calculated on the basis that the plate has a speed of 2 Watkins or *f*/14 Wynne.

Indoor Exposure.

First let us point out that for all ordinary still-life subjects indoors, providing they are, generally speaking, light in character, we measure the direct light falling on the subject with a Watkins meter, and the time the paper takes to darken to the standard tint is the time required for exposure at *f*/8. If the camera is very near the object, so that it has to be opened out appreciably more than for ordinary outdoor work, we allow for the extra extension *f*/8 when the camera is extended half as much again as usual is *f*/12, and the exposure needed is therefore a little more than double; this must not be lost sight of. The exposure, too, must be increased if the subject is one of dark color or with heavy shadows, particularly if no reflector is used; but with a reflector and with ordinary subjects, fruit, flowers, etc., also with paintings, this we have found perfectly reliable; not once, moreover, but twenty times or more; this is now our invariable rule.

Out-of-doors Exposure.

Out-of-doors we use the Watkins meter, but work out the exposure on the basis of the plate having a Watkins speed of 2. That, also, we have found reliable over and over again. Now it has not escaped our observation that these two methods are apparently contradictory. If the practice mentioned in the previous paragraph is correct, then the Watkins speed of the plate should be 1 and not 2. We are not prepared at the moment to explain this anomaly, but we believe there is a simple explanation. Certainly out-of-doors anyone who regards the plates as having a speed of Watkins 1 will find that he is overexposing.

Users of the Wynne meter know that Watkins 2 is about Wynne $f/9$, but Mr. T. K. Grant, the London manager of the Lumière Co., always works the Wynne meter with the plates, and finds that they have a speed of Wynne $f/14$. For out-door work, then, let us advise once more that the exposures given be arrived at by taking the plates as Watkins 2 or Wynne $f/14$.

Portraiture.

Portraits and figure subjects are among the earliest class of work which will be attempted with these plates. Although in consequence of the yellow screen the time cannot be kept down as much as the ordinary plate, still under favorable circumstances there is nothing formidable about the duration of the exposure. Outdoor portraits, especially, are the most effective, and may be taken in full sunshine with all the powerful contrasts which such a method of lighting gives, without any of that harshness which would be unavoidable were the pictures in monochrome. The writer recently obtained some very successful outdoor portraits of this sort with exposures of five or six seconds at $f/8$. Indoors the limitations are greater, and the exposures may range up to a minute or even longer in London, but even then the time is not prohibitive.

Development.

The photographer exposing his first color plate will be eager to develop it and see what result he has got. As the light in the dark-room is very scarce, it is well if he arranges to have no bottles whatever on his bench except those immediately required. All that he will need is a measure containing the mixed developer and a bottle containing the C solution, which latter should be placed by the watch or clock where he can see it. The two solutions, A and B, should not be mixed together until immediately before developing the plate, as when mixed they soon discolor. Going into the dark-room, closing the door, and turning the light away from where the plate is to be developed, it may be taken out of the dark slide, not forgetting that it is the opposite way round, and put in the dish. The measure may contain the B solution and the water, the A solution being handy in another vessel. The A is added to the dilute B solution, the liquid is swirled round once or twice to mix it thoroughly, and is then poured over the plate. Plenty of developer must be used to make sure that the plate is properly covered, as we cannot hold it to the light to see. The developer being poured on, the dish is covered with a card and rocked for two minutes and a half.

Reversal.

The developer is then poured off and the plate is washed for fifteen seconds under the tap, put back into the dish, and covered with the C solution of potassium of permanganate and sulphuric acid. As soon as this has been done (less than three minutes, all told after beginning the development) the plate, unfixed, may be carried out into the broad daylight and everything else done in the fullest light. In less than half a minute, on holding up the plate, the colors will be seen to make their appearance, and in a couple of minutes the permanganate has done its work and the plate is no longer a negative, but a positive, in true colors, though the colors are not as brilliant as they will be at the finish. The C solution may be allowed to act until there is no doubt about the reversal being complete. A minute or so extra in this bath does no harm.

The Second Development.

The plate is again rinsed for fifteen seconds and an ordinary amidol developer poured on—in full daylight, be it noted. The daylight and the amidol darken the creamy-looking surface of the film, and when the solution has acted for two minutes it is poured off again. Another fifteen-second rinse is followed by a quarter of a minute or less in the permanganate reducer, but this time it must be very dilute. Another rinse and we pour on the silver intensifier, which is allowed to act for half a minute or more. This brightens up the colors, and as soon as it has acted sufficiently it is poured off, and a fairly strong plain solution of permanganate is applied for half a minute. This is followed by a more through rinse, which in its turn is followed by two minutes in acid hypo; then the plate has five minutes' washing under the tap and is finished.

No Difficulties.

Now, although if that list of operations is read over quickly it seems elaborate, they take less time to perform than it has taken up to write a sketch of them. The sensitive film is so thin that each solution speedily acts right through it; hence the fixing is complete in two, the washing in five, and the drying in fifteen minutes. Here, too, let us point out the absence of difficulty of any shape or kind. Except the silver intensification there is no one stage which calls for any determination by the eye. The development is done by the watch and all the other operations by time also. Anybody who can pour liquid over the plate and can tell the time by the watch can carry them out as efficiently as Messers. Lumière could do them themselves. As for the intensification, that is done until either the colors are bright enough, which can easily be seen, or the solution becomes muddy, in which case it must be poured off and fresh must be used.

The Intensification Process.

Although the intensification in the printed instructions takes its place between the second development and the fixing, there is no reason why, if it seems to need it, the finished autochrome picture should not be intensified. The same silver nitrate and pyro solutions may be used, and in this way a picture which only seems to need a little brightening up to be perfect, can have just the additional "snap" that it wants imparted to it. The only objection to the course is that the pictures should be wetted as little as possible, as any re-wetting necessarily endangers them; but with due care the risk is slight. The silver solution may be poured off and the plate rinsed and dried forthwith; but, although it increases the time during which the plate is wet, it would certainly be better to precede it with the E solution and to follow it up with the permanganate and hypo. This removes any slight discoloration left by the intensifier.

The Need of Intensification.

Writing to M. Martiny, Messrs. Lumière pointed out that it was never advisable to omit altogether the intensification process. The *Photo-Gazette* prints their letter, whence we extract what follows: "After second development with amidol, the colors can be very well seen, but they have not at this stage got their brilliancy. This follows because the deposit of silver is extremely thin and cannot be made any thicker except by intensification. Besides the intensification process not only brightens up the colors and gives the pictures more contrast, it corrects a slight tendency toward a greenish

tint, which is caused by the nature of the reduced silver. For these reasons, therefore, we regard the intensification process as indispensible. One may, nevertheless, postpone it, and keep the picture in that condition for a certain time to be intensified later on; but in any case one must not forget that intensification ought always to be preceded by the oxidizing solution."

Hints.

The surface of the plate must not be touched while it is wet or the film is sure to be damaged. Anything like the rub under the faucet which one gives to an ordinary negative to finish up with is quite out of the question with autochrome plates. It would simply take the film off. For the same reason they must not be exposed to a strong stream of water from the faucet. A gentle, unbroken stream carries no risk of injuring them, and this, therefore, is what should be used. It is also important not to prolong the operations unduly, especially in hot weather, or frilling of the photographic emulsion may take place.

The varnish supplied by Messrs. Lumière is a solution of gum dammar in benzole, as alcohol varnish must not be used. It is very easily applied, and partially dries very quickly, but the film remains tacky for an hour or two, so should be left where it will not gather dust and will not be touched for that time. It is a good plan as soon as it has hardened to mask the plate, provide it with a cover-glass and bind it up, so that it may be adequately protected from finger marks and other mechanical injury. The tackiness is prevented by diluting the varnish as already mentioned.

Another matter which is worth mentioning concerns the fingers of the operator. The pyro-silver intensifier is, as is well known, one of the most terrible "skin-stainers" used in photography; and it is practically impossible to use it without turning the fingers jet black. Fortunately, if taken in time, this is easily cured. The acid permanganate solution which Messrs. Lumière call C, and use for reversing the image, will remove the black stains from the skin in less than half a minute, leaving a deep-brown stain instead. This brown stain yields at once to a weak solution of oxalic acid, and a wash with soap and water completes the cure. The oxalic acid must not be used if the skin is broken anywhere, and is very poisonous, but its effect is speedy and complete.

The makers recommend the use of a glass dish with these plates. Only one is required, as the different solutions destroy each other, some of them being applied for no other purpose. The dish is, therefore, quite clean at the finish of the operations, and ready to be used afresh. It is a bad plan to finger the plate any more than can be helped as it will if touched repeatedly at any spot at its edge, very likely start a frill there. A glass dish prevents this entirely by doing away with all necessity for holding up the plate for examination. The whole dish may be held up when necessary, and the plate left in it from the commencement of the development until it is finished. It is well, too, not to rock the dish too violently, so as to send a wave of the liquid up against the edge of the plate, lest there should be any little edge of the film there under which the liquid might make its way and carry the mischief further. For the same reason we find the best way to wash the plate is to place it on some support two or three inches below the faucet and let a plentiful but gentle stream flow on to it. In this way all tendency to frill is prevented.

We have not attempted to cut up autochrome plates while in a sensitive

condition, but we have cut up several positives obtained on the plates. This is easily done, if the film has not been varnished, by making the diamond cut on the glass side in the usual way and bending sharply backward. The film breaks at the same time as the glass, showing that it is far more brittle than the gelatine film on an ordinary plate. A varnished positive needs some care, as there is a tendency for the photographic film and the varnish together to strip off the starch grain layer, which itself adheres closely enough to the glass. In fact the best plan to adopt, if a little piece of the photographic film is needed for microscopic purposes, is to cut a fragment of a varnished picture. It does not always strip, but it generally "comes off" in both senses.

PICTORIAL PHOTOGRAPHY IN FRANCE.

BY ROBERT DEMACHY

In *Photograms of the Year* 1907.

THE only event of the photographic world in France has been the absence of the annual Photo Club Salon—a "negative" event surely. Already last year the question of the opportunity of replacing the annual show by a bi-annual one had been raised, and it was only because the measure had been proposed too late in the season that it was not enforced there and then. In principle it was adopted, and it is possible that hereafter the Paris Salon will only be held once every two years, unless a suitable gallery can be retained at a fixed date for a long period and a better mode of recruiting pictures can be found.

For, though it appears incredible, no private gallery is available in Paris during the two months that play the part of the English season over here, April and May. June comes too late, and March too early. The Petit Palais is now closed to all exhibitions—it has become a national gallery. The Grand Palais is occupied during the last days of March and the two first weeks of April by the Horse Show (Concours Hippique), and immediately after by the two Salons de Peinture. There are some other galleries on hire, of course, but they are situated outside the narrow circle which Parisians call "central," and might as well be in Pekin if they are not within ten minutes' walk of the Place de la Concorde.

Moreover, the Photo Club Committee has long ago been tempted to try the experiment of the bi-annual Salon in the hope that the quality of the work sent in would be influenced by the novel circumstances. If we admit that our exhibitors only produce in view of the Salon, and not for their own artistic satisfaction, nothing will be changed; but we believe—and we already know that we have good reason to believe—that the yearly production will be equal, and that each exhibitor will thus have double the number of pictures to choose from next year. Personally I have little faith in the value of work that is rushed through in view of a Salon. This annual laying of eggs at a fixed date cannot come to any good. It is the same with music, painting, or literature—the worst things are those that are made to order. Let a man work because be cannot do otherwise—just for the pleasure of creating something out of his brain; let him choose the best examples amongst his spontaneous

work, and it is probable he will show you something that is worth while. At any rate, we are risking the trial. If it succeeds it will be time for other societies to follow our example. If not, we can always return to our ancient methods. But it seems that our hitherto unexpressed opinion on the expediency of leaving more space between photographic exhibitions has been shared by the French provincial societies. Exhibitions have been scarce in 1906–1907. The Nice Salon will only take place next year, and that is a pity, for there was to have been a mixture of photographs and black and white at the Beaux Arts Show that promised some new experiences. Outside of the Marseilles and the Sarthe exhibitions, no Salon of any importance has been held in the provinces.

We have noticed a marked advance in the number of the anachromatic lenses, of the Puyo-Pulligny type, in use amongst amateurs and professionals. The classical portrait lens is quite abandoned; photographers want, above all, depth of focus and, with less unanimity, a certain degree of diffusion. These two conditions are fulfilled by the anachromatic portrait and landscape lenses already in use—to which we must add a new tele-photo combination for the studio—by Major Puyo. I have been able to experiment on the first objective of the kind, and I am more than satisfied with its remarkable qualities. In bulk it is not bigger than the symmetrical lens, covering the 18 x 24 cent. French plate (indeed, the new objective will be sold with interchangeable lenses of the tele-photo and symmetrical combinations). It gives, at a distance of four yards from the model with a bellows extension of 50 cent. (about 19½ inches), a head one-third natural size. There is absolutely no exaggeration of perspective. The enlargement is regulated by the bellows extension, the image being focused by means of a rack and pinion arrangement that separates or brings nearer together the two lenses of the optical combination. A correction is necessary, which consists theoretically in measuring the distance between the two lenses after focusing and racking the front lens back a four-hundredth part of the aforesaid distance. In practice a carefully calculated scale will be engraved on the mount and the position of the stop after focusing will indicate, automatically, the number of millimeters that the lens has to be racked back, a second scale in millimeters being engraved directly underneath the first. This objective, with 50 cent. bellows extension, in a well-lit studio, has given excellent results at full aperture with an exposure of two seconds. It is fairly rapid, and its definition, although it is exquisitely soft, does not lack firmness in the drawing.

There has been a rush on the Lumière trichrome plates, and hundreds of amateurs have been busy developing and re-developing with sometimes startling results. Up to now these really wonderful plates have not been used for purely pictorial ends. Mr. Steichen is now pursuing some experiments on the new plates, and his results will be most interesting to note; I may even say that they will decide the question as to the artistic future of the direct three-color process. This is another proof that every new photographic advance towards art requires the services of hitherto unphotographic knowledge. Gum and oils have obliged photographers to study the relation of values and accents, and the *tour de main* of inking—how the Lumière process will make us learn the intricate laws of color! It will not be done in a day, and we must resign ourselves to the inevitable atrocities that the over-confident amateur is going to

thrust upon us. I have already met with a certain number of eyesores of that description in comparison with which the colored advertisements in the sixpenny magazines are soothing.

There are two styles of experimental color photographs, the elaborately composed interior and the landscape. In the first example, which is the most common, the ardent amateur has crowded all the colors of the rainbow, the hideous plush, forgotten for a while, appears in its pristine glory (purple and electric blue); there are flowers—dahlias mostly; Turkish carpets, tapestries, copper vases and a glaring poster or two; and the author believes he has given the trichrome plate a fair trial, which he has not, for no painter would dream of placing side by side such a hopeless collection of discordant hues. He knows too well that the juxtaposition of certain pigments causes them to "sing" as we say in French, while other combinations will deaden the brightest of tones or change its color.

Experimental landscapes are not so offensive as a rule, because less open to manipulation, but they are generally taken under the common impression that nature is always right and that its exact counterpart in color must be art. I believe I have heard something of the sort about line and form in nature, in the course of sporific discussions about art and photography. Now, if you will take the trouble to watch a painter roaming about disconsolately, hunting for a motive or waiting patiently for a certain hour of the day, because of a certain quality of color that is only found at that particular hour, you will realize that even in nature it is necessary to choose. Unless you prefer to believe that the painter knows nothing about his business and that photographers know better. It is a convenient belief that saves a lot of work. Elsewise, you will be obliged when photographing nature with the trichrome plates, to take into consideration a quantity of color conditions that never troubled you before. Lastly, there is the exposure to decide upon, and that is of enormous importance. This makes success—I mean *artistic* success—difficult for a photographer who is not a colorist. And there has been nothing about our previous photographic training that can have taught us even the rudiments of the art of color. All that we know about it is that red comes out black and that blue comes out white. (And even that lesson has not convinced some of us that photographic values are wrong!)

For documentary purposes it appears that, given proper experience in guessing the time of exposure, there will be sufficient accuracy in the rendering of colors to give very precious records of facts, infinitely more precious than the line records we have been used to. Without going into details one can imagine the difference between a lecture on travels in distant parts illustrated with trichrome lantern slides, and the same lecture with monochrome pictures on the screen. The frozen representations of the gorgeous colorings of Eastern costumes, for example, which have up to now presented such a ridiculous contrast with the glowing descriptions of the lecturer will soon be a thing of the past.

The oil process, introduced last May with practical demonstrations at the Paris Photo Club, has been received with a quite unusual amount of enthusiasm by the members and later on by the provincial societies. Messrs. Puyo, Michau, Prin d'Origny, Viscount de Singly, Besson, Hachette, Roy, Cte. de Montgermont, Mlle. Massion, M. Grimprel, Mlle. Laguarde, Conte. de Lestrange, and a few others, seem to have successfully mastered the mysteries

of the inking and, I am happy to say, have produced with apparently identical methods quite different styles of work. This is distinctly in favor of the process. The Marseilles Society has taken it up, and several of its members are studying the process in view of their next Salon. I have noticed that most of the first trials in oils that I have been able to examine showed on the part of their authors an evident tendency toward purely technical perfection, and an equally evident timidity in the handling of the inks. So perfectly smooth and soft were some of these prints that they could have been mistaken for very perfect bromides—and were not more pleasing from a pictorial point of view. But for many amateurs this will be but a passing stage, and they will soon learn how to take advantage of the wonderful possibilities of the process. The Paris Photo Club Committee intends to organize for next February a very select one-process show for oils. It will be open to all countries, and we hope that England—the birthplace of the Rawlins, if not of the Poitevin process—will send us some good oil pictures by well-known pictorialists.

RECEPTION-ROOM CONTRASTS.

BY C. H. CLAUDY.

To write an anonymous letter is generally esteemed a mean and ungentlemanly thing to do. To travel 'round the country *incognito* is practised by the greatest and most exalted of people—so fashion sets the seal of her permission on a quibble. At the same time, while I have been guilty of doing some investigating *incog.* which would have been less successfully accomplished had I announced my purpose, I trust my readers will not think too badly of the proceeding, inasmuch as what I found out benefits me not at all, may benefit some who hear of what I saw, and hurts no one, since I shall not, either now or hereafter, mention any names.

I visited eleven different galleries, located in two cities, to see what I could learn from the standpoint of a possible customer, and what things I should find, or what indications I should come across, which would naturally demand my custom. With a couple of exceptions the work shown me was, in all cases, excellent. That is, photographically, it was good—clear negatives had been used to make handsome, clean, bright prints, which were artistically and pleasingly treated, either in a mount or a frame. As my little trip was not to determine the relative excellence of these eleven photographers, the one to the other, but to see what their externals would say to a possible customer, I lay aside all question of good work. All the photographers I visited—with the exceptions noted and to be told of later—were good photographers. All had, presumably, a good trade; and all, let us hope, were engaged in delivering good work for money taken—as good as the samples they showed.

The first gallery I visited was on the sixth floor of an office building. I took the elevator and stepped from it immediately into the reception-room. The general impression was very pleasing. The room was partly divided—by pillars and hangings of dark Japanese lattice-work—into several alcoves; there were a number of comfortable chairs, and the

walls were fairly well covered, although not crowded, with large examples of the proprietor's work; comparatively small and inconspicuous counter and show-case were in one corner; there were windows on two sides of this room. There were several people waiting when I got there, and I had ample time to observe the receptionist and her methods before she got around to me. There was nothing to quarrel with in her manner, which was polite and cordial, but she spent no more time than was absolutely necessary on each customer. Meanwhile I noticed a few things which became plainer as I looked: The velvet was badly worn off two of the chairs; three out of seven framed pictures hung crooked; a part of the Japanese woodwork had become broken, and its jagged end still protruded unfixed; there was a thin layer of dust on top of a table; a large portfolio, conspicuously displayed, had some magnificent photography in it, marred with poor and very dirty, and, in some cases, torn mounts. This studio is one of a chain of several in several cities. The owner leaves it entirely to his operator, receptionist, and dark-room man. I understand he visits it once or twice a year. Naturally things run down. Now this place has a good trade, but it misses a better one by a lack of attention to details and a laxness which would not be tolerated in a home of any pretensions. Yet it is offering itself as a temporary resting-place to its customers and expects the impressions of its undeniably good work to overcome the insidious impressions of the somewhat run-down furniture and fixtures.

The next studio I went to was exactly the reverse. I looked in vain for anything not spick and span. The pictures displayed were not so many in number nor so great in size, but every one was a new print—clean and attractive, and every one showed something different from the others; the receptionist was a charming young woman, somewhat plain of feature but very engaging in manner, professing interest in some small styles, and she could hardly do enough for me or other customers present or who passed through while I was there. I saw her sell an extra half dozen of enlargements to a woman who had already paid for two dozen half-length panels, and she did it in such a way that the customer left enchanted with her bargain. A somewhat poorly dressed and obviously ignorant woman was waited upon strictly in her turn and received every bit as much courtesy and the same pleasant smiles that the other customers had had. I will not say she had so much time spent upon her, but she left with a smile, and she left well treated. If she has any money to spend, she will spend it there where no account was taken of her dress or looks, but where she was greeted with a smile and an interest taken in her wants. *Yet the show-case of this studio has not been changed for three months to my certain knowledge.* I suppose they haven't time. They do a big business and a paying one; but I have never known any concern that had more work than it wanted *all the time.*

Studio No. 3 is considered possibly a little old-fashioned, but very reliable. Its show-cases and its wall decorations are the enlarged negative, platinum-prints-of-celebrities style. The furnishings are plain and prim, but clean and neat. The general impression is that all the attention goes to the work and none to the frills. No shop-girls or society women come here. A large, even trade of middle-class people, who have bought here for years and will do so to the end of time, form its patronage. There are two receptionists, pleasant-mannered young women, who do what they should and sell you what you want; but neither is to be compared for a moment to the little woman in No. 2 in ability or in paying power to the studio.

Studio No. 4 was a sad sight. The name over the door is old and well-known. It has been over a photographer's shop, from father to son, for half a century. At one time it was one of the biggest businesses of its kind in the country. It is so no longer. On the counter in the bare reception-room is a pile of prints, pressing flat beneath two books and a dusty paper weight. The wall about the telephone is scribbled full of pencil numbers. A man's coat and a pair of cuffs are upon a chair. Four pictures sit dolefully upon the floor with their faces turned out—two more have their backs to the observer. A pompadoured girl in a soiled apron spots prints at a window. A man in shirt-sleeves is ticketing negatives by another window. The girl doesn't see me until I cough, and then she rises without a smile to her work. Almost wordless she shows me what she has—names the prices—that is all. The general impression is one of lack of interest, mould, deadness. A woman comes to return proofs as I leave. She complains about something, I do not quite hear what. I do hear the man arguing with her while the poor receptionist, robbed of her job, stands to one side helpless. I know for a fact that the work done here is beautiful, for I have often seen it, but I am afraid its quantity has largely diminished, and by a process of dry rot will presently die away entirely. When the proprietor has no pride in the appearance of things which tell his story to newcomers, you can be sure he is either trying to sell or commit business suicide.

The fifth gallery I went to is owned and operated by a woman. She has two women assistants in sight and I suppose more out of sight. She does essentially woman's work and does it well, but she does not draw the line at men at all. But she very frankly tells me—the receptionist has brought her in to interview the unusual man—that she is more successful with women and not much used to posing men. Everything about the place is as neat as a new pin and almost in good taste. But there are too many spindle-legged gold chairs, too many curtains and hangings, and entirely too much bric-a-brac for real beauty. Although each individual thing is real, and the colors harmonize, the general impression is "stuffy." Not being a woman I can't say but what this is attractive to them; but I think not. I imagine it repels many who want work done. Another thing I notice is that the work turned out is poorly finished. The negatives were good, the prints all right, but they are carelessly trimmed and mounted and spotted in some cases. This is bad business with orders, but in samples it is suicide.

Gallery No. 6 is on a grand scale. There are no less than three reception-rooms, each larger than the last and all are sumptuously decorated. There is a great deal of heavy red plush, and chain-armor and battle-axes and suits of armor—there is a multicolored half-tent in one corner of one room and the lighting is subdued throughout. The receptionists are very busy. They show me what I ask for, after telling me they do not do that class of work. They evidently take me for what I am, a not-at-all-wealthy prospect and rate me accordingly. I do not get enough attention to make me feel anxious for more. A small boy who has a package in his hands waits long for notice and is still waiting as I leave. A man whom I know by sight rushes in, fur-coat thrown back, diamonds on his shirt, wealth radiating from every pore. It takes two girls to wait on him, while several of us stand around and wait. I understand this gallery does a huge business with wealthy people and hasn't time to bother with small orders and small customers.

But I want to make a point that anyone can heed or not, as he sees fit. There

is such a thing as declining a piece of work because there is not enough in it, without giving any offense. There is another way which makes the customer feel as if he would like to wreck your place. When I go to a big printery to have a hundred business cards printed, and they take as much interest in it as they should, and are polite and deliver goods on time, I am apt to send them the first big job I handle. When I go to another printery and he growls out: "Full up; haven't time to fool with such little jobs as that," and puffs smoke in my face and turns his back, I don't feel much like carrying my orders there. A photographer may readily decline to do work he knows doesn't pay him, as crowding out bigger jobs; but if he does it in such a manner as to make an enemy or hurt someone's feelings, however negligible a factor that someone may be, he is pulling bricks from his own foundation wall. Many a tale gets up the backstairs, and there is many a tradesman who loses trade—photographer or butcher, it matters not—because My Lady lends indulgent ear to the complaints of her maid. You can't afford, I don't care how big you are, to be anything but courteous and polite, and I mean the true courtesy and the true politeness which make friends; not the technical politeness and courtesy which consist only in not kicking your customer down stairs.

The next gallery I go into is uptown. It is a little place and the lady who waits upon me is proprietor, receptionist, retoucher, and operator in one. Her little reception-room is a homey, living room—with never a pretense and never a frill, but it is genuine. Her work is good, for the prices she asks, and she tells me it is getting better. She has a good trade among a rather low-priced class of work, but it evidently pays. I have less opportunity for observation here than elsewhere as there is no one there when I come and I have to talk business or get out—which I do.

Gallery No. 8 is a mass of confusion. It is the rush time of the day and a dozen customers are clamoring for attendance, and a girl, the owner, and an office boy are distractedly trying to wait on all at once. The furniture is badly arranged—the counter and show-case are where they get the worst possible light and there is considerable calling in and out of the operating-room between the owner and "Jake," presumably the operator. Instead of taking his customers one at a time, and giving each his undivided attention, this misguided man is endeavoring to sell three women three different kinds of photos, and each is wanting to know why he isn't recommending to her the kind he is telling her neighbor she should take. As one is large and stout, the other tall and thin, and the third of impossible profile, it is obvious why; but the poor man can't explain and gets all involved and suspicion sits upon the faces of all three.

A charwoman scrubbing down the steps in the middle of the day only accentuates the note of bad management.

My inspection of these places was, of course, but superficial and is in no way final, but just you remember that your customer's inspection is superficial too, and final only as concerns herself! It is what she sees and hears and the way she is treated in the first five minutes of her acquaintance with you that determines if she likes you or not—and if she doesn't some other fellow gets the money. I have never realized as I did after this little trip how much it pays to put attention in externals in a business where impression at the outset is so much of the game. I really believe it will pay any proprietor of a gallery to visit himself a half a dozen others, where he is unknown, in the same critical spirit which I took with me. It is certainly worth a trial.

PHOTOGRAPHING AGAINST THE LIGHT.

BY A. J. ANDERSON.

SUBJECT pictures in which the figures are photographed against the light seem to be in vogue. I see that many of the successful competitors at the recent Kodak competition adopted this scheme of lighting, and I foresee that it will be well to the fore at the autumn exhibitions.

This popularity of against-the-light photography is not surprising, for not only does the scheme lend itself to pictorial effects, but it also offers a difficult and interesting problem from a technical standpoint. But are these pictures often satisfactory? Are they often convincing and true to natural lighting? I am afraid not, for the simple reason that the contrasts in a figure silhouetted against the light are beyond the range of the ordinary methods of photography.

I know a method, however—a simple chemical method of treating the exposed plate before development—which places the contrasts completely under the photographer's control, and enables him to secure fully exposed shadows, with soft high lights or strong high lights, thin high lights or dense high lights, at will. I do not claim any credit for the discovery, as the formula was originally published in an article which appeared in *The Amateur Photographer*, but the writer of this article chiefly applied his method to bromide enlargements, and its application to ordinary negatives appears to have escaped notice; at any rate, I only know one photographer who controls severe contrasts by the Winthrope Somerville formula.

Now this method requires both study and intelligence on the part of the photographer; it cannot be applied by rule of thumb, for the photographer must study the values in the subject to be photographed, and determine the depth of the shadows, the amount of shadow detail, and the strength and brightness of the high lights; and he must exercise sufficient judgment to stop development the moment the desired degree of contrast has been obtained.

In the study of values, I should suggest the following preliminary experiment: Stand opposite a window, at a few yards' distance, and place a model so that she rests against one side of the window frame. Then, as she turns, first her side face, and then her full face, notice the elusive quality of the shadow details; they are neither distinct nor indistinct, and they are lit up here and there by light reflected from the dress and shoulders. Next ask your model to read a newspaper, with her face slightly turned away from the window, and notice the attractive nature of the shadows, which are illuminated by the light reflected from the newspaper. Then remove the newspaper and place the conventional white reflector (a linen sheet on a towel-horse will do), so that it illuminates the shadows, and I am certain you will see how artificial and unnatural this plan of illumination appears, and discard all thoughts of using the customary reflector when photographing against the light. The white light from the visible newspaper appears right, but the white light from the invisible reflector looks quite wrong. I believe the success which the Americans have achieved in this branch of photography is chiefly due to the avoidance of the reflector.

Notice especially, that at certain angles the eyes reflect a quantity of light, and if the photograph was taken with the eyes in this position, the model would appear blind: this point must be always

borne in mind, as it may be easily overlooked in the interest of posing the figure; a slight lowering of the eyelids will often set matters right.

It is almost impossible to secure satisfactory values in against-the-light subjects by means of ordinary photographic methods, as the contrast between light and shade is too severe; when it is realized that the shadows on the model's face would necessitate an exposure of perhaps twenty seconds to secure detail, whilst the correct exposure for the high lights would be perhaps one-half second, this is obvious. If we expose and develop for the high lights, the shadows register no detail; if we expose for the shadows, the high lights develop into unprintable masses of density with strong traces of halation.

But suppose we expose for the shadows, and are able to hold back the development of the high lights until the shadows are developed? Suppose we realize that the film has an appreciable thickness, and that whilst the high lights have penetrated right through the film, the shadows are quite on the surface. Suppose we soak the film in a strong restrainer, such as a saturated solution of bromide, before development, and after a rinse under the tap to wash the bromide off the surface, we proceed to develop the plate in a strong, warm developer? Then the shadow details will develop fully, whilst the high lights, deep in the film, will be held back by the bromide. If development be continued after the shadows are developed, the bromide will gradually wash out of the film, and the high lights develop to full density.

Bromide, however, is a poor restrainer compared with that formulated by Mr. Winthrope Somerville:

Copper sulphate	10 grains.
Potassium persulphate	20 grains.
Nitric acid	50 minims.
Water	40 ounces.

Expose the plate fully for the shadows; probably 20 to 30 seconds at $f/8$, with a plate 200 H. and D., will be none too long. Soak the exposed plate in the above solution for thirty seconds. Rinse under the tap, and develop in a fairly strong pyro-soda.

It will be found that the image takes some time to appear, considerably over a minute; that development commences irregularly, but proceeds rapidly. Probably sufficient contrast will have been developed in from 3½ to 4 minutes; but if development be continued the density of the high lights may be increased to almost any extent. When the plate is placed in the developer, after its rinsing, a pad of cotton-wool must be passed over the surface to remove air-bubbles.

Such is the method, simple and practical; but I must point out its one defect —the high lights lack delicate gradations. On the other hand, the high lights can be brought into harmony with the shadows, and the shadow details are exceptionally fine in quality.

I have never understood why Mr. Winthrope Somerville's article attracted so little attention. Those who wish to photograph figures against the light, either indoors, or out-of-doors with the sun almost opposite the lens, will find the formula invaluable. In fact, it is a most useful formula when dealing with extreme contrasts of any description.—*Amateur Photographer.*

Dead Black for Wood.—(*a*) Borax, 30 gr.; glycerine, 30 minims; shellac, 60 gr.; water, 1 oz. Boil till all dissolves, and add nigrosine W. S., 30 gr.

(*b*) Copper chloride, 75 gr.; potass bichromate, 75 gr.; water, 2¼ oz. Paint with this, let dry, and apply:—Aniline hydrochloride, 150 gr.; water, 2¼ oz. Wipe off any yellow powder that forms, repeat process till black enough, and finally rub over with boiled linseed oil.

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By J. C. Strauss, St. Louis

By A. F. Bradley, New York

By Mrs. Sara C. Sears, Boston, Mass.

By Miss Ruth Turner Perry, Paris
From "Photographische Korrespondenze"

MADAME G.
By Elizabeth Flint Wade and Rose Clark, Buffalo, N. Y.

By C. J. Von Dühren, Berlin, Germany
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By Al. Kosel, Vienna, Austria

By R. Golike and A. Wilborg,
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By Neue Photographische Gesellschaft, Berlin-Steglitz
From "Photographische Korrespondenze"

F. BENEDICT HERZOG—A MASTER OF DECORATIVE COMPOSITION.

BY SIDNEY ALLAN.

THE name of F. Benedict Herzog—absolutely unknown four years ago—has of late become fairly well known in photographic circles. He has received an unusual amount of publicity, and publicity that can not be sniffed at, an article in the *Century Magazine* being after all the highest literary appreciation a photographer, and for that matter also an artist, can get in this country. Although his method, or rather his photographic technique, has been subject to severe criticism, the general trend of these articles is by far more laudatory than otherwise.

The "art gentlemen" who penned these appreciations seemed to realize that Herzog attempted something new, and that "story telling" in photography had never before been treated in such an ambitious and elaborate manner as, for instance, in his "Tale of Isolde," "Banks of Lethe," etc. They were not far from the truth, although their estimates on the whole lacked definiteness; they arrived at no conclusions, they failed to tell us in what particular phase of artistic endeavor Herzog excels, and why he, perhaps more than anybody else, has the right to call himself an exponent of "the higher photography." I believe I was one of the first art writers who became acquainted with his work, and I was attracted by it from the very start, but somehow I had no opportunity until to-day to express my opinion about his work in print. I met Herzog for the first time about four years ago in the New York Camera Club. It was a chance meeting. I was introduced to him as a man who "was trying to do some new stunts," and soon after Herzog produced a wallet containing some hundred photographs of draped figures and nudes. I was astonished at the apparent ease with which he posed and draped figures. I did not remember of ever having encountered in painting as well as in photography a more decided talent for the handling of drapery as was revealed to me in those tattered proofs. And this criticism still holds good to-day.

As a photographic critic, with straight photography as an ideal, I of course am not in the position to fully endorse Herzog's departure. Even as Bernard Shaw did with Demachy I have to do with Herzog and call him a traitor in the photographic camp. My objection is not so much to his method of arranging and bringing together various photographs, and by some intelligent means or other to build up a pictorial mosaic, but rather to his neglect of certain technical qualities which to me constitute the greatest charm of photography. The natural gradation of values, the principal characteristic of photographic texture, cannot be brought into perfect harmony with such "control and embellishment," no matter how cleverly it may be imparted. The means cannot be entirely concealed, and as long as they are not concealed the photographic texture will suffer thereby. But this is an old story, and although there is no getting around it, it should not influence one's judgment of other accomplishments.

Herzog has probably realized as well as I have certain technical shortcomings in his work. But they seem small and unimportant to him, as he tries for other and perhaps bigger things. He conceives his pictorial vis-

ions as a master painter would, on a grand scale, in decorative friezes or panel compositions of several feet in length, built up of several groups. There are twenty to thirty or even more figures in some of his compositions. This is the new note he has added to pictorial photography. He has lifted it out of the ruck of one-figure composition, and proved beyond doubt that it lends itself to the display of higher constructive and creative qualities. This was Herzog's aim, and he could not accomplish it in any other way. Already Salomon, in the seventies of the last century, and the ingenious Reylander, who combined thirty different negatives in his "Two Ways of Life" (1887), realized this, and Herzog is a true descendant of these two men. Only he reaches farther and attempts subject-matter from the fields of poetic romance and allegory which were far beyond the pale of combination printing.

Herzog, if I understand him rightly, does not so much wish to be ranked as a pictorial photographer (in the sense of Stieglitz and Steichen), but rather as an artist who uses photography solely as a medium for the expression of art problems and emotions. If that is his standpoint, of course he should be judged accordingly. A critic's business is largely to find out what a man is driving at and to convey his observations in a logical manner to the public. It may be difficult to classify Herzog for some time; but what of that? Innovations, no matter in what field of activity, are always difficult to classify. They arouse our curiosity, and we are apt to regard them as strange phenomena whose ultimate value we are unable to determine; time alone can do that. And so it will be with Herzog's work.

In the meanwhile let us admire what there is to admire, and there is much. First of all, I admire how he goes about his work. He does not believe in portfolio photography. Nearly all his finished prints are enlargements, some fourteen by twenty inches or more, and they are made with an idea of that size. They are story-telling pictures, but conceived for no other purpose than decorative embellishments. They are *objets d'art*, pure and simple.

Having looked at hundreds of them, again and again, during the last four years of our acquaintance, I must confess that they impress me as something very apart and praiseworthy. I have met many artists in my day, but I do not remember of ever having met an artist (and I refer to artists of high standing and superior skill) who had such a wide and intimate knowledge of drapery. Considering that Herzog sometimes makes forty to fifty exposures in an afternoon—compositions of a never-ending variety and all of a fair average excellence—one cannot help pronouncing this gift an extraordinary one. He is at home in all styles. No matter whether it is the crushed and crumpled drapery of the Pre-Raphaelites, the pompous style of the Venetians with its broad planes of shining velvet, or the pliable, soft, stunning effects of a Reynolds or a Gainsborough, he masters them all, and, although his imagination is haunted with the souvenirs of former, more-picturesque periods in the history of costume, he is invariably the interpreter of his own moods. His feeling for line is exceedingly fine, in detail as well as in the rhythm of long, sweeping curves, and is perhaps nowhere better expressed than in his management of hands and the twist he knows how to give to the neck and shoulders of his figures. In his big compositions he is at times a true poet; he has in his mind some vague idea, suggestive of some poetical sentiment, as, for instance, in his "Men Kiss and Ride Away" (August *Cosmopolitan*),

and he carries it out with rare sympathy and grace, and a perfect balance as far as lines and masses are concerned.

To be able to do this in photography is indeed a rare accomplishment, as all photographers who have entered upon the pictorial field well know from experience, and they will no doubt agree with Herzog's own words on these "photographic difficulties":

"To costume, pose, light, and arrange the bodies, draperies, hands, and faces of a group of even only two or three of the most adaptable and willing models; to watch until the end of the exposure every fold of the drapery, every changing shadow which may be cast at some undesired point as the models are moved tentatively; to study every movement of the head or expressive feature of the face or the nervous and often unconscious change in the fingers or hands of the nerve-strained models—all this furnishes an exercise in patience, invention, and concentration of faculties which I find about as good a test of what engineers call 'the maximum efficiency' as any task I have ever performed."

Herzog is by profession a civil engineer and inventor, and was also for some time engaged in art work, I believe as a poster painter, previous to his photographic exploitations, and I believe his success is largely due to this combination of scientific precision and artistic aspiration.

His decorative schemes are no productions of chance—he is too much a constructionist for that—they are carefully planned and patiently carried out, and he has at all times enough of the temperament and enthusiasm of an artist to lend grace and beauty to his original ideas.

Herzog has said a new word. He has widened the scope of pictorial photography and fashioned for himself an individual and personal mode of expression—and if that be not genius, it is at least a serviceable substitute, and we cannot but admire it.

HOW THE PLANETS ARE PHOTOGRAPHED.

BY DR. S. A. MITCHELL,
Columbia University.

THE safe arrival in the United States of 7000 photographs of the planet Mars is an astronomical event of no small importance. To transport a delicate lens 18 inches in diameter from New Hampshire to the Andes; to carry this lens and its mounting up to the height of 14,000 feet above sea level and there assemble the many parts into a perfect-running machine, a powerful telescope, is in itself a gigantic undertaking. But when there is added to these almost insurmountable obstacles the difficulties of existing—we can hardly call it living—for a couple of months on an arid desert so high above the sea, we can gain some small insight into the huge task undertaken by Prof. Todd of photographing Mars at its near approach to the earth.

Whether these photographs prove that Mars is inhabited or not, Prof. Todd and his chief assistant, Mr. Slipher, who made all the photographs, are deserving of nothing but the greatest praise for overcoming great observational difficulties and procuring this splendid series of plates made under the greatest of bodily discomforts. One does not ordinarily go and live in a desert for the sake of having a pleasure trip; and the only motive that

could have actuated Prof. Todd and Mr. Percival Lowell in financing and sending out the expedition was the desire to arrive at the truth regarding the interesting markings on the planet Mars.

Those who have never tried to photograph the stars can have no idea of the difficulty of the task; but when one attempts to portray the planets in detail, these obstacles are increased many times. Photography is no new art. We all of us know how easy it is to take a snapshot of a landscape and get a pretty picture; why is it then that no serious attempt has ever been made before to observe the planets with the help of the photographic plate? However, when it is mentioned that a huge camera with a lens 18 inches in aperture and 25 feet in focal length gives an image of Mars, when it is nearest to the earth and consequently at its largest, only $\frac{1}{25}$ of an inch or one millimeter in diameter, the size of a pin head, one sees the utter impossibility of showing any details on so small an image, much less to decide whether a given mark is a straight canal or some other geographical feature. A photographic plate placed at the focus of the 18-inch telescope that Prof. Todd used would give a picture but one millimeter (0.039 inch) in diameter. After such a plate was developed, it could of course be enlarged by an ordinary camera, and a bigger Martian picture obtained. For a minute study of planetary detail this method would lead to results of little or no practical importance.

It may be asked, Why not use a telephoto lens on Mars? This has led to splendid results in landscape work, giving a picture of mountains fifteen to twenty miles distant as if they were only a short way off. This is in reality the very process used in photographing Mars or Jupiter. A magnifying lens is placed in the telescope just before the photographic plate, and an enlarged image of the planet is obtained. Prof. Todd has used a magnification of about five diameters in getting his Andes photographs. A greater enlargement than this is practically impossible. The much-heralded photographs of Mars taken with such an expenditure of time, energy, and money (the original photographs cost about a dollar apiece) have the scant diameter of $\frac{3}{16}$ of an inch, and the photographic work must be of the very best, and great observational difficulties must be overcome to procure even these tiny pictures.

When the celebrated firm of Alvan Clark & Co. made the Amherst lens, they did not intend it for photography, and accordingly ground and polished the objective so that the yellow and green of the spectrum, the colors that most affect the eye, should be brought to a good focus. A lens can be considered as made up of a series of prisms, and we all have seen how the ordinary prisms on a chandelier break up white light into its spectrum colors. Thus when a star is viewed through a good astronomical telescope, the red and blue rays are not sharply focused, and as a result the star is surrounded by a beautiful purple color. With this color the astronomer is always familiar but it invariably leads the beginner on his first peep through a big glass to exclaim, "What magnificent colors!" If an ordinary photograph were made with a visual lens, it would be impossible to get a sharp image, for the simple reason that the optician in making the lens did not grind it with the purpose of bringing to a good focus the blue and violet light which most affects the photographic plate. This can be done by the optician, and we then have a good photographic telescope, but a poor visual one.

If an astronomer happens to have a

first-class visual telescope, and wishes to take photographs, he has to adopt a measure with which we are all familiar in landscape work—that of using a ray filter or color screen and isochromatic plates. This color screen must be used a little more intelligently than is done in landscape work by even the best professional photographers. It becomes necessary to make a careful study of the objective, and construct a color screen of a very particular kind. Mr. Wallace, of the Yerkes Observatory, has done some admirable work in investigating photographic plates and ray filters, and a "Wallace screen" and isochromatic plates have been found to give splendid celestial photographs with visual lenses.

But consider how the light from Mars must travel after it reaches the telescope before an image $\frac{3}{16}$ of an inch in diameter is obtained on the photographic plate—through the objective, through the lenses that make up the magnifier, then through the color screen to an isochromatic plate. All these several parts must be in the best of adjustment and focus if a good sharp picture is to be obtained. But during the ten or fifteen seconds that are necessary to photograph Mars, its light has had to travel through miles and miles of the earth's atmosphere. This we know, from the twinkling of the stars, is always in a state of unrest. The disturbance in the air blurs the photograph, and it is next to impossible to get a good image, one in which the very fine details will stand out hard and sharp. The only feasible way of overcoming this difficulty is the method adopted by Prof. Todd of making a series of exposures, twenty-five to fifty in number, all on the same plate. When the plate is developed, the few seconds of best seeing will be evident from the increased sharpness of the photographs.

Mars was closer to the earth in 1907 than it has been at any time since 1892; but, unfortunately for the observatories of America and Europe, it was very low down in the sky. At the beginning of July, when nearest the earth, Mars at the Yerkes Observatory was never more than 20 degrees above the horizon. This necessitated looking through a great thickness of the earth's atmosphere. It was to diminish the ill effects of this atmosphere that the Lowell expedition went to the top of the Andes.

Prof. Barnard, with his beautiful photographs of the Milky Way and star clusters, has shown more than any other man the wonderful possibilities of photography in astronomical work. With the 40-inch Yerkes telescope, he made splendid photographs of Jupiter. At the focus of this great telescope (over 60 feet in length) Jupiter when nearest the earth appears directly as an image $\frac{3}{16}$ of an inch in diameter. When enlarged five diameters, Jupiter is nearly an inch in diameter, just as if it had been photographed with a telescope 300 feet in length!

But Jupiter is more easily photographed than Mars; first, because in the telescope it is about twice as big as the ruddy planet; and second, because Jupiter's surface being about two and a half times brighter than that of Mars, a shorter exposure is necessary. To get original negatives of the same size from the two planets, it would be necessary to give Mars ten times the exposure of Jupiter!

The astronomical world is awaiting with great eagerness the verdict of Mr. Lowell when he examines carefully the Andes photographs. If nothing definite is proved this year regarding the canals of Mars, there will be a chance to try it again in 1909. Then the planet will be even closer than it was this summer, but, what is more important, it will be 25 degrees higher in the sky.—*Scientific American.*

COPYING OLD AND FADED PHOTOGRAPHS.

BY A. LOCKETT.

It is often required to copy a photograph that is beginning to fade, and which, for the sake of some old association, it is not desired to lose entirely. In some cases the original may be cleaned or otherwise improved by chemical treatment, so that a better copy may be secured. Such work, however, requires care and is always risky, so that it is advisable to secure the best possible negative that can be made from the photograph as it is, before proceeding with any attempt at improvement.

Cleaning Soiled P. O. P. Prints for Copying.

The gelatine film of a P. O. P. print is peculiarly liable to attract dust and dirt, unless framed or kept in an album. Greasy and dirty finger marks may be removed, to a great extent, by very gently rubbing the film with a crumb of rather stale bread—on no account should it be new or moist. Probably this will remove the major portion of the discoloration. If not the print should be cautiously rubbed with a clean piece of cotton wool moistened with benzine, which will remove any remaining grease marks, and speedily evaporates. Benzine should only be used in the daytime, away from any fire, since its vapor is highly inflammable.

Restoring Yellow and Faded Albumen Prints.

So long as the detail is tolerably distinct, there is no real necessity for treating a yellowed albumen print before copying, since, on an ordinary, non-orthochromatic plate, mere yellowness will frequently result in making it possible to obtain a much brighter and more vigorous copy than would be expected from looking at the original. If much yellowed, it is worth knowing that a blue or violet screen placed in front of the lens (or behind it, if preferred) will cut off the yellow rays, thus making the faint details photographically black. A suitable screen can be obtained from any optician, this color of glass being in request for goggles; or one may be made by staining an unexposed, fixed, and washed plate with a solution of methyl violet, an aniline dye procurable from the chemist. When, however, the print is very far gone, the following plan might be tried, having first taken as good a negative as possible from the original, for fear of mishap. Soak off the print from the mount by leaving in water until it comes off of its own accord, and well wash to get rid of any adherent mountant. Then make up a solution of neutral gold-potassium chloride in distilled water, of a strength of 1 gr. to the oz. The print is allowed to remain in this until it appears sufficiently restored, well washed, refixed in a clean hypo bath of the usual strength for prints, and finally washed thoroughly. It can then again be mounted and copied from. The use of mercuric chloride for removing yellowness, as somet mes recommended, is terribly risky.

Restoring Yellowed Platinotypes.

Yellowness in platinum prints is almost always due to the iron salts not having been sufficiently eliminated when the prints were made. It is gen-

erally possible to remove this yellowness, when the photographs are as good as ever, since a genuine platinum print does not fade. If mounted, first unmount the print as above, taking care not to tear it, as this paper is easily torn. Then take hydrochloric acid, 2 drs.; water, 5 oz.; and add a few drops of sodium hypochlorite solution, until the characteristic odor of chlorine is noted, somewhat resembling chloride of lime. The prints are allowed to remain in this until the yellowness disappears, and are then transferred to a weak solution of hydrochloric acid, say, 1 in 60, finally well washing. A faint platinum print will often give a better copy if intensified to a brown color with uranium. The procedure is exactly the same as for a bromide print. This intensification may be removed afterward if desired, and the print restored to its former color, by prolonged washing; or by the use of a dilute solution of sodium carbonate or ammonia, followed by a slight washing.

Brightening Dull Bromide Prints.

A dull bromide print on matt surfaced paper is, especially if old and slightly faded, very difficult to copy. In such a case it is a good plan to secure an artificially glossy surface on the print. This is very readily done by rubbing the latter lightly with encaustic paste, applied with a soft rag, and polishing off with a silk handkerchief or flannel. The following home-made mixture is also very suitable: Melt 100 gr. of pure white beeswax in a small enamelled or porcelain vessel, and add, when melted, 40 minims of dammar varnish and 100 minims of pure oil of turpentine, taking care not to overheat. Thoroughly incorporate these ingredients by stirring, and use when cold as described for encaustic paste. This method greatly brightens the print, helping to bring out the buried shadow detail, and so enabling a better copy to be obtained; it is equally applicable to platinum and other matt surfaced prints.

Copying Old Unmounted Prints.

An unmounted albumen P. O. P. or bromide print which has become cracked and soiled may be rendered suitable for copying as follows: Lay the print on a flat surface and rub it gently all over with glycerin, applied liberally with a tuft of cotton wool. Much of the surface dirt can be removed in this way. Fresh glycerin is then poured on and the print is squeegeed face down on a clean sheet of glass. A piece of stiff white paper is next well moistened with glycerin and squeegeed over the back. The print can now be copied; the glycerin having temporarily brought it into optical contact with the glass, thus abolishing all the worst cracks and obliterating the grain of the paper. Of course care must be taken to avoid reflections from the glass. When the negative is secured, the print is removed from the glass, carefully washed and dried, or, if preferred, mounted.—*Focus.*

All works of taste must bear a price in proportion to the skill, taste, time, expense, and risk attending their invention and manufacture.

Those things called dear are, when justly estimated, the cheapest; they are attended with much less profit to the artist than those which are called cheap.

Beautiful forms and compositions are not made by chance, nor can they ever, in any material, be made at small expense.

A composition for cheapness, and not for excellence of workmanship, is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufactures.—*Ruskin.*

AN EXCELLENT REDUCER.

BY FRED CRANE.

CONSIDERING the number of excellent reducers, formulæ for which are to be found in every text-book, it would seem somewhat superfluous to draw attention to one which, though old, is apparently quite forgotten; but it is so excellent in action, and can be so readily applied locally that this must be my excuse if any be needed.

It may be made up into one solution and will keep for any length of time and may be repeatedly used, or it may be made into a stock solution and diluted down as required.

To make this we require, first of all, some of Labarraque's solution of hypochlorite of soda. This is very easily made and is cheap.

Chloride of lime	1 ounce.
Water	6 ounces.

Shake well and add

Carbonate of soda	2 ounces.
Water	6 ounces.

This forms a thick white cream, which should be poured on to a filter paper or tuft of wetted cotton wool in a funnel and allowed to drain through. The precipitate in the funnel should be washed with water as soon as it has ceased to drop, until the clear solution that runs through measures twelve fluid-ounces.

The actual reducer is

Labarraque's solution as above	1 ounce.
Chrome alum	20 grains.
Water	10 ounces.

I prefer to dissolve the chrome alum in one and one-half ounces of water and add to the hypochlorite, and then dilute with three parts of water just before use.

The negative need not be soaked in water first—it can if necessary be put in the reducer dry. It is not even necessary to see that the negative is absolutely free from hypo, as the above solution immediately destroys the hypo left in the film.

After the negative has been immersed in the solution for a short time, it should be removed and the surface rubbed with a pledget of cotton wool wetted with the solution, holding the negative up to the light so as to be able to gauge the reduction. The friction practically wipes off the top layer of the film of gelatine and silver, and, consequently, by applying more friction in one place than another, it is possible to reduce locally.

The above solution is very cheap, therefore it is not worth while keeping the used portion, especially as it is an excellent disinfectant for the drains.

It must be noted that the chloride of lime mentioned is the so-called chloride of lime and not calcium chloride, which is useless. The reaction which occurs in making the first solution is, of course, very simple. The carbonate of soda throws down carbonate of calcium, leaving the hypochlorite of soda in solution.—*Photo. News.*

Preparing Photographic Prints for Coloring. The print should be gently rubbed over with a solution of oxgall and allowed to dry, or the colors may be diluted with it.

Purified oxgall	1 dram.
Columbian spirit	5 ounces.
Water	5 ounces.

We have known people to add a trace of Castile soap to their color merely by wiping their pencils occasionally on the surface of the soap.

BROMIDE PRINTING AND DEVELOPING.*

BY J. STERRY.

As the first catalogue of bromide papers, taken at random, gives eighteen varieties from which to make a choice, the beginner may need some help in his first selection. There need not be much trouble, however, as all may be readily classified thus:

Table I.

Surface.—Glossy, smooth, rough, matte.
Color.—White, mauve, pink, tinted.
Rapidity.—Rapid, slow, very slow.
Gradation.—Long, medium, short.

It will be seen that the most important differences are in the rapidity and gradation, whilst surface and color may be looked upon as varieties only, which later on will be selected specially to suit the subject in hand.

Rapidity.

But little, also, need be said respecting rapidity, as that simply governs the relative duration of the exposure with any given negative, whilst, of course, in the case of rapid papers greater care must be taken to prevent the action of stray light during the different processes. The various uses for different rapidities may be classified thus:

Table II.

Rapid.—For enlarging by artificial light and the contact printing of dense negatives.
Slow.—For enlarging by daylight or contact printing of negatives of medium density.
Very Slow.—(Gaslight papers) are especially suited to the contact printing of negatives which are very thin and weak.

The rapid and slow require the use of a dark-room, but a bright orange light is all that is needed for safety in working. The gaslight papers have the further advantage of being readily worked in a room lighted by gas.

Gradation.

It is here that the greatest difference in the character of various papers will be found, and for want of a knowledge of which the beginner often meets with failure in his bromide printing. Not being able to attribute his troubles to the real cause, he is unable to determine as to whether it is his own fault in working or the unsuitability of the paper to the negative from which he wishes to print.

But very little information is given by the makers upon this point, notwithstanding its great importance, therefore, before dealing with practical working, it will be well to try and make it as clear as possible. When once thoroughly understood and working upon the lines to be laid down, it will be quite easy to determine what can and what cannot be done with any given paper or negative.

Gradation may be described as the range of the paper, or its power to represent varied degrees or proportions of light action.

The shortest gradation or range found in any paper is about 1 to 16, that is, if an exposure of one second to the chosen source of light at a specified distance just gives the faintest possible trace of action upon the paper, when fully developed, then about sixteen seconds at the same distance would be found to give the deepest black obtainable.

On the other hand, a very long range paper would probably be found to require over one hundred times as much

* This article is extracted from Jas. A. Sinclair's *Photographic and Optical Guide*, one of the most carefully compiled and best-arranged catalogues of cameras and optical goods we have seen in some time. The first part of the guide is devoted to a series of seven articles, each by the best writer on its particular subject. This feature alone makes the catalogue well worth the 25 cents, in stamps, necessary to secure a copy. Published by Jas. A. Sinclair & Co., 54 Haymarket, London, England.

exposure to obtain the deepest shade as would be needed just to impress it at all, the development being in this case also carried as far as possible.

Seeing that any negative selected for trial must transmit a definite scale of light intensities according to the density of the silver deposits, it is clear that the same result could not possibly be obtained on both papers (short and long range) if the development was carried out to the full.

Now, whilst it is true that stopping the development before it is quite completed does somewhat alter the scale, the control thus obtained is so slight, that the better plan is to ignore it altogether and start with the general rule, *that development shall be carried to the full.* Any slight disadvantage due to this determination is amply compensated for in the certainty of being able to duplicate results, and also in the ease and speed of working generally. (Later on, a slight chemical modification in the development will be described which gives a real change in the gradation of the paper at will.)

The Negative.

The object of this paper is to give the best plan of working for a difficult subject, requiring the fullest range of white to black that can be obtained, such as a landscape with bright clouds and deep shadows. More easy subjects not using the full scale of light will not receive special consideration upon the principle that "the greater includes the less." Very poor results are often seen in bromide prints because so many think that any negative and any paper should somehow be made to work together, which is very far from being the case.

From what has been said about gradation it is evident that there must be some particular character in the negative which will make it suitable for printing with each of the papers. This difference is found to be solely connected with the development of the plate, and has nothing whatever to do with the exposure in the camera. Given correct exposure, then the relative duration of development solely determines the printing character of the negative and its suitability for obtaining the best results by different printing processes.

For bromide printing generally, and especially for enlarging, the negative requires *less development* than for any other printing process.

The following table will give a general idea of the differences needed in the development of the negative to make it best suited to the different papers.

Table III.

Negative.	*Character.*	*Contact Printing.*	*Enlarging.*
Very short devpt.	Very thin.	Gaslight paper.	Slow bromide.
Short devpt.	Thin.	Slow bromide.	Rapid bromide.
Medium devpt.	Medium contrasts.	Rapid bromide.	Rapid bromide and special treatment.
Long devpt.	Strong contrasts.	Rapid bromide and special treatment.	Rapid bromide and special treatment.

Unless one is specially preparing negatives for bromide printing, it is better generally to develop, so that they will be of use for another process such as platinum printing, and then to classify them according to the table above. It will then be possible to select the most suitable paper or mode of working.

Exposure in Printing.

As it has been shown that with a given negative there is one kind of paper which (say, for contact printing) will give the best results with full development, it is easy to see that the exposure must be

such that the most dense part of the negative shall be represented in the finished print by white paper or a faint tint.

It is here that the advantage comes in of not allowing any variation in the time of development, but always carrying it to the full, because it is vastly more easy to arrive at the correct result when only one condition of working (exposure) is varied at once.

Make this, then, the starting point in every trial—*Find the exposure that will just give, upon full development, the faintest detail desired in the most dense part of the negative.* The manner in which the shadows are then found to have been rendered will at once show how far the paper chosen has been correct or otherwise.

If the shadows are not deep enough the paper is too rapid, because, generally speaking, the more rapid the paper the longer the gradation. If there is not all the detail shown in the shadows, which it is thought the negative should render, then the paper used has been too slow. If, however, the most rapid paper has already been used in making the trial, then the special treatment to be described later will probably prove useful.

Naturally one would not make use of any extra treatment, unless compelled to do so, both on account of the extra trouble, small as it may be, and also because the result probably would not be quite equal to that which could be obtained from the paper which was in itself most suited to the negative.

As it is very desirable to be able to record exposures so that they can readily be repeated at any time, a systematic method should be arranged from the outset. The following will be found useful for all varieties of contact priting.

Source of Light.

Bromide papers. Lamp or gas (No. 5 Bray, flat flame).
Gaslight papers. Gas (No. 5 Bray or incandescent) or magnesium ribbon.

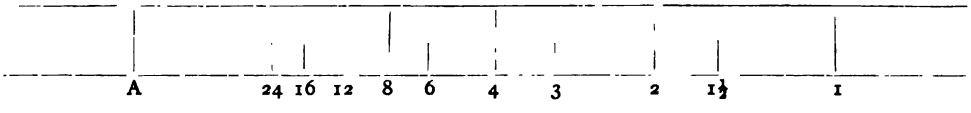
Some plan should be arranged for making exposures at definite distances from the source of light, so that the correct amount may be given in, say, 10 or 20 seconds. A useful scale may be arranged by marking off distances as shown below upon a board about four feet in length.

If the source of light is placed at A, and the distance of one meter or one yard is taken as the unit, then the value of the light will be as shown by the numbers, if the distances are marked off thus:

Distances in Inches.

Unit	1	1½	2	3	4	6	8	12	16	24
Meter	39.37	32.2	27.8	22.7	19.7	16.1	13.9	11.35	9.85	8.05
Yard	36	29.4	25.4	20.7	18	14.7	12.7	10.4	9	7.35

Exposure Scale.



If it were then found that a certain negative and paper required 20 seconds' exposure to the Bray gas, when placed at 1 (meter), the needed information could be registered as 20 G. M. S. (20 gas, meter, seconds). When using a slow bromide paper, if it were found that 120 seconds should be given at point 1, then the entry would be made 120 G. M. S., though to save time in printing the actual exposure might be 15 seconds at point 8, giving the same result. In the same way when using a gaslight paper, M. minutes would have to be sub sti-

tuted for seconds, or the required length of magnesium ribbon and distance noted. (One inch of magnesium ribbon one-eighth inch wide is about equal to a No. 5 Bray burner at 1 meter, burning for ten minutes.)

The Developer.

Bromide Papers. Almost any developer may be used, but one of the most satisfactory is amidol. A stock solution of sodium sulphite is made of about 10 grains to the ounce of water, and a little time before required, 1 grain of amidol is added to each ounce of solution. The amidol need not be weighed each time, but may be measured with sufficient accuracy with a small spoon or on the point of a knife.

N. B.—The sulphite should not be kept more than a few days, as it deteriorates. No bromide of potassium should be needed to prevent fog, so that this developer is very simple and it gives the finest blacks.

Notwithstanding the fact that several prints may be developed in succession in the same developer, it is a rather doubtful policy, as the action soon slows down and there is a tendency to discoloration as the developer becomes weakened.

The time taken to obtain full development will vary with the speed of the paper, the general rule being that the more rapid the paper the slower will be the development. Three or four minutes will probably be sufficient for the one that develops most slowly.

Gaslight Papers. These differ from the ordinary bromide papers, and always require some bromide of potassium in the developer. The metol-quinol developer has taken the first place, and full directions are given in the packets. When used of full strength the developer may be applied with a brush, the print to be developed being placed on the back of a dish. The image flashes up almost instantly, and development is completed in less than one-half minute.

It is very important that no more bromide of potassium be added to the developer than is absolutely necessary, otherwise the tone of the black will be affected.

We will now consider the practical working. In the first instance three papers will be sufficient, and these will readily give all the necessary general knowledge of the process of bromide printing.

1. Rapid white, smooth bromide paper.
2. Slow white, smooth bromide paper.
3. Matte white, gaslight paper.

We will presume that ¼-plate negatives are to be used, and the paper obtained of that size. Prepare, say, one-half ounce of soda dissolved in twenty ounces of water. Amidol for the bromide paper. M. Q. cartridges for the gaslight paper and 1 per cent. bromide of potassium.

Now select a negative (preferably a landscape with well-defined clouds and somewhat heavy shadows in the deepest parts) which as nearly as possible answers to what is considered the meaning of a *thin* negative (Table III), taking care that it has had sufficient exposure to be full of detail.

Examine it carefully in a good light, and notice the most dense portions that show some sign of detail. If any cloud is shown in any part of the sky then take that portion for the purpose of obtaining the correct exposure as described below. If there is not any cloud, then notice particularly any portion of the distance which is but little less dense than the sky.

The object is to find as previously noticed, some portion of the picture which *should be just represented in the print by a very faint tint*, and then to find the amount of exposure to the light that will just give this result upon full

development. This is the exact opposite of the good old rule in negative making, "Expose for the shadows and let the high lights take care of themselves." That which cannot be done in the negative is possible in bromide printing, so that the rule may stand: Expose for the high lights, and if the shadows don't come right of themselves, a slight extra treatment will probably bring them right.

We will presume that the source of light chosen is a No. 5 Bray gas burner, and having in the dark-room placed, say, one quarter of a sheet of slow bromide paper upon the selected portion of the negative in an ordinary printing frame, we will give a trial exposure of twenty seconds at the point 4 on the scale, equal to eighty seconds at 1 on the meter scale. If the area of the trial portion will permit of being divided up, time will be saved by obtaining three exposures on the same piece of paper, thus: Cover the front of the frame with a card, and when the frame is in position before the burner, uncover one-third of the paper for twenty seconds, then another third for ten seconds, and remove the card altogether for ten seconds more. The exposures will then have been forty, twenty, and ten seconds, respectively, equal to 160, 80 and 40 G. M. S. at point 1. If, after full development, by which is meant that fresh detail no longer continues to appear, the desired exposure is not found within this scale, but evidently greater or less, a guide will have been obtained for a second trial.

We will suppose that the portion that has had twenty seconds appears a little too dark, and that with ten seconds does not show at all, but is quite white; then it is evident that an exposure of about fifteen seconds or 60 G. M. S. should give at any rate this one portion of the picture as desired.

We may now proceed to make a full-sized print from the negative, and see what knowledge can be gained from the result obtained.

There is one thing that should be constantly borne in mind—the finished dry print is always less brilliant than when wet, so that the exact final appearance cannot be ascertained until it is dry. After a few trials it will be comparatively easy to estimate this difference and to learn when a wet print is satisfactory.

Having, then, obtained a print exposed fifteen seconds at 4, developed, fixed, washed, and dried as directed in the instructions with the paper, we shall find that the high lights are very closely correct, but the shadows *may not* be satisfactory. In any case, whatever, the following table will be found to cover all points and show both cause of difference and remedy.

Table IV.

Result.	*Cause.*	*Remedy.*
1. Very black shadows. Too brilliant result.	Negative too much developed for the paper used; gradation of paper insufficient.	Try again with more rapid paper (if rapid paper had been used the modified treatment to be described would be required).
2. Shadows good.	Correct.	Correct.
3. Insufficient depth in shadows, flat result.	Negative not sufficiently developed for the paper used, gradation of paper too great.	Try again with a slower paper.

It will be noticed that no such table as this could be made unless full development were the rule in working, and the remedy might not then be easily found because of the complication of causes of error.

As it will now, perhaps, be necessary to try working with the gaslight paper, the only points to be observed are:

1. The usual dark-room is not needed, but it may be lighted with an ordinary gas burner.

2. A developer containing bromide of potassium must be used, as described in the directions.

3. The exposure may be to the gaslight as before, but requires so much time that it is more readily made by burning magnesium ribbon. One inch lighted at the distance marked 8 on the scale would probably be suitable for a first trial. The rest of the work will follow in the same manner as described for bromide paper.

Extension of the Gradation.

It only now remains to describe the method of using the modification in development, which will extend the scale of gradation.

So far nothing is known that will *decrease* gradation in the development of bromide papers, except the addition of bromide of potassium in large quantities, which at the same time very materially alters the color of the deposit and is occasionally employed for that purpose; consequently, if a negative is so thin that it will not give a good *black* print on gaslight paper, the only remedy is to deal with the negative itself and intensify by means of one of the well known processes. Hitherto the greatest difficulty in bromide printing has been to obtain good prints from negatives which, having been developed to give considerable contrasts as required for P. O. P., platinum, etc., are too hard for representation by means of the most rapid papers, notwithstanding that they have a long scale of gradation. This difficulty is more especially found in enlarging, because the negative is needed to be so much thinner then than for contact printing.

Experiments upon the action of bichromate of potassium (and other salts) upon the latent image or its development showed that by means of weak solutions applied for a short time between exposure and development the scale could be greatly lengthened out, thus extending the detail in the shadows without materially altering the result already obtained in the high lights or changing the color. The result is, therefore, that whilst the speed of the paper remains practically unaltered, so far as it affects the rendering of the high lights, and the exposure required is therefore the same, a print on gaslight paper can be made to give a similar result to that obtained upon slow or rapid bromide paper, or even, if desired, a longer gradation than either.

Consequently good prints can be obtained upon gaslight papers from almost any negative, except, perhaps, some that have been developed excessively. These may be dealt with by extending the scale of the rapid bromide paper in the same manner.

The method is exceedingly simple, for nothing else is required but the addition of a very small quantity of bichromate of potassium to the washing water before development. The alteration made is dependent upon the strength and time of immersion. The action is so rapid that it is well to keep to one length of time, say, one minute, and vary the strength only. Exposure will be the same, but development should be continued until the desired strength of the picture is obtained. The high lights soon cease to increase much in depth, but the shadows gradually put on strength like the development of a negative plate. This process may be described as the flattening of too great contrasts, and, of course, if overdone will result in too flat a print, just as is the case when in the ordinary way the negative is too thin for the paper (Table IV, 3).

So far, only one make of paper has been

found practically unaffected by bichromate of potassium; but, generally, the slower the paper the less strength required to bring about a change.

For gaslight papers 1 part of bichromate of potassium in 500 of water will be found to have a very marked effect, and 1 part in 100 will be sufficient for trial upon the bromide papers.

The best way to commence is to take a negative which gives a print, say, upon gaslight paper, in which, when the high lights are correct, the shadows are black and without detail (Table IV, 1).

Having exposed a piece of the paper under this negative for the proper time for the high lights, cut it into four strips. Immerse one strip in a bichromate of potassium solution, 1 to 500, for one minute, rinse in changes of water for fifteen or twenty seconds altogether, and develop with one of the other pieces. If the difference is not sufficient take another of the strips and place in the same way in the 1 to 100 bichromate of potassium and develop. If the action is now too great and the print too flat altogether, another trial can be made with the fourth strip. When a very great alteration is desired, it may be found somewhat necessary to increase the exposure, because there is a tendency after a time when strong bichromate of potassium is used to practically destroy the weak portions of the image.

An acid-fixing bath should be used, as any stain remaining from the bichromate of potassium is removed during the fixing.

The same course is to be carried out when the gradation of the slow and rapid bromide papers is to be extended. Should an excessive alteration be desired, it is most readily accomplished by substituting permanganate of potash, about 1 part in 1000 water, for the bichromate. A deep brown stain may be left on the paper, but this is cleared away in the acid fixing bath.

Enlarging.

The methods previously described are readily applied to enlarging.

The trial exposure must be made upon a portion of paper placed in position upon the easel, the highest lights being, as before, selected for trial.

It is a peculiarity of enlarging that the negative behaves, when compared with contact printing, as though it had been developed much longer; consequently, a longer scale of the paper is required to give good results. Even with the most rapid paper and the longest scale obtainable, most negatives will be found too strong to give the best possible results, and the bichromate method will then be found particularly useful. After exposure simply follow the directions previously given under contact printing.

General Remarks.

If before taking up general printing, four negatives are selected (or, better still, purposely prepared by exposing four plates equally on the same subject and developing for *varied times*) as stated in Table III, and experiments made so as to obtain both good contact prints and enlargements, using the three papers selected and the control with the bichromate of potassium, the set will be of great service. It will make a standard with which to compare other negatives, and by means of which it will not be difficult to select by inspection the best method of working. The bromide print is probably the most lasting of all silver printing processes, and the ease with which it is produced without recourse to daylight makes it specially suited to the requirements of the amateur.

From being the most exacting of all processes as regards the negative, the method of control of gradation described adapts it to both weak and dense negatives, whether used for contact printing or enlarging.

STAND DEVELOPMENT.

BY GEORGE HASSELL.

THE increasing use of color sensitive plates, and the generally recognized fact that it is utterly impossible to improve a negative by looking at it during development, has attracted considerably more attention to this particular method of developing exposed plates.

The main advantages of this process are that one may feel perfectly satisfied that as much will be brought out of the plate as by the ordinary method in cases of under-exposure, with the added advantage of ensuring that the plate is not fogged, nor that the high lights will become too dense. In cases of over-exposure it will give as good results as the ordinary method. When panchromatic plates are used one has the added safety of the plates being in darkness during the whole of development, thus ensuring perfect freedom from fog.

The greatest advantage of this method is that one can shut up the tank and leave the dark-room, and thus save considerable time, which to a professional photographer is money. To the amateur it is also a convenience to be able to leave the dark-room and amuse himself in other ways. It practically means, too, that one may use a much smaller dark-room than usual, or temporarily darken a room, which can then be used for other purposes.

There are many different kinds of tanks on the market; the best is constructed of metal and has a small cell for each plate. The advantage of this over the ordinary smooth porcelain tank, is that one may develop one or two plates with the minimum quantity of developer, whereas when a grooved trough for six or twelve plates is used then there is a considerable waste of developer, as one has to make up sufficient for the whole trough.

This method is applicable to every make of plate and every developer, but there are some which are much more suitable than others. The original formula was so diluted that one could safely put the plates into the developer at night, just before going to bed, and leave them there until after breakfast the next morning. This is, we think, carrying things to the extreme. Half an hour, or even one or two hours, is reasonable and not inconvenient.

There are three developers which are especially suitable: rodinal, glycin, and pyrocatechine; on the other hand, as stated above, any developer may be used and anyone with a preference for or a stock of any developer has merely to dilute it with water to obtain a solution suitable for this method.

For rodinal a good strength is 100 minims to a pint of water. The average time with this is one hour.

For Pyrocatechine.

Pyrocatechine	4 grains.
Sodium sulphite	12 grains.
Sodium tribasic phosphate	20 ounces.

For Glycin.

Glycin	10 grains.
Sodium sulphite	10 grains.
Sodium carbonate	150 grains.
Water	20 ounces.

This also takes about one hour.

Naturally with any developer the total duration will depend upon the temperature and the exposure, therefore there may be variations from the above, but as the developer is so weak it takes some considerable time for a plate to become over-dense.

It is hardly necessary to give directions as to all the steps of the process, but all commercial troughs are marked externally to show the correct level of the solution. The plate should be gently slid into the solution without stopping, and after soaking a minute or two, should be lifted up and down once or twice to remove any possibly adhering bubble.

When development is complete all that is required is to drop the plate into the fixing bath, and preferably this should be in a grooved porcelain tank.

This is the best and cheapest way of using hypo.

I have used stand development for all kinds of work for over twelve months now, with very satisfactory results, and would not go back to the old method for anything.—*Photo. News.*

BLISTERS IN BROMIDE PRINTS.

SINCE the introduction of toning bromide prints with sodium sulphide, blisters have become so common that it is a serious matter, as whole batches of prints may be spoiled at any moment. The blisters occur in such an erratic way that the ordinary photographer is unable to trace their cause to its source—or sources, for there are probably many. Some brands of paper seem more liable to this defect than others, yet different batches of the same maker's paper vary, and some will blister and some will not. It has been suggested that grease on the paper before coating with the sensitive emulsion is a probable cause. But this would produce large blisters, and the trouble is usually that the prints are covered with small blisters from one-eighth to one-quarter of an inch in diameter, and the large ones are exceptional.

Before the days of sulphide toning blisters occurred, but the defect was not a common one. Several remedies were suggested, such as immersion in a solution of common salt, without washing, from the fixing bath; or a bath of methylated spirit in place of salt and water; but even then the cures often failed, and blisters frequently appeared. Prints on thin paper seemed more liable to blisters than prints of the same make on thick paper, yet postcard prints often show blisters badly, though they generally disappear on drying. The local water supply no doubt has some effect in causing blisters; where the water is "hard," in a limestone or chalk district, blisters are less liable to appear, while in some of our large towns, such as Glasgow, Liverpool, Manchester, and Birmingham, the water is "soft;" being drawn from lakes (natural or artificial) in mountainous districts, being practically rain water, in which there are but small quantities of lime and other minerals.

The excellence of Burton beer is said to be due to a peculiar hardness of the water yielded by the wells in the district, and in other parts of the country brewers "Burtonize" their water by the addition of carbonate of lime and other salts. Unfortunately, photographers cannot do that, as the supply comes, as a rule, direct from the water mains; if large tanks were used it might be possible to harden the water before use.

A curious thing happened in Birmingham some two or three years ago, when local photographers were troubled by blisters suddenly appearing in untoned bromide prints. They were at a loss to account for it, until a letter appeared in the Press, from an amateur photog-

rapher, suggesting that it was caused by the arrival of the water from the new Welsh reservoirs. In a few months the trouble ceased for a few weeks, and then broke out again as badly as ever. It afterward leaked out that the demand for water had been so great that the old supply of water from the wells, in the red sandstone, had to be requisitioned, and then the blisters ceased; then when the demand fell to its normal quantity, undiluted Welsh water was supplied, and the blisters appeared again.

Medical men who practise photography find that bromide prints, developed in their chambers in Birmingham, blister, while those developed outside the town, where the supply comes from wells in red sandstone, do not blister.

The question then arises, How can photographers who are compelled to use a "soft" water prevent their prints from blistering? The answer is, By using a fixing bath containing alum. Many object to such a bath, arguing that it endangers the permanence of the print. If it is prepared in the haphazard way in which many men work it may, and probably will, affect the stability of the print. If the fixing bath is prepared by throwing a handful of alum into a solution of hyposulphite the prints fixed in it will turn yellow sooner or later. But if the bath is properly prepared there seems no reason to fear any deterioration. Many manufacturers recommend an acid fixing bath containing alum, and for some of the newer brands of bromide paper, in which the paper support is thin, alum is an absolute necessity; and for many of the "Gaslight" papers on the market an acid fixing must be used if yellow prints are to be avoided.

A good formula, one well tested by long use, is:

Water	64 ounces.
Hyposulphite	16 ounces.
Sodium sulphite	1 ounce.

When the crystals are dissolved add 1½ ounces of glacial acetic acid, and finally 1 ounce of potash alum dissolved in 5 ounces of water. A large stoneware jug can be used for mixing, and hot water hastens the solution of the chemicals; it should, of course, be allowed to cool before use. If properly mixed, the solution should be only very slightly cloudy. The surface of prints fixed in this bath should feel "leathery" to the touch in about thirty seconds after immersion, and the bath should not be used too long without renewal. If the surface of the print is soft after a minute's fixing, a fresh bath should be substituted at once. It is best to make up a gallon or more at a time, so that a stock of unused, fresh solution is always ready. If found more convenient it may be mixed double the strength, and diluted for use as required. After washing prints may be spread out to dry, face downward, so avoiding curling. If the prints are to be toned with sulphide they must be dried before being toned, or they may blister; and any rough handling or buckling of the wet prints must be guarded against, as this is a frequent cause of blisters.

After the prints have been bleached by the photographer's favorite formula, they must be darkened by the application of the sulphide, which must not be too strong—½ ounce of saturated solution of sulphide should be diluted with 40 ounces of water—and the prints should not remain in it any longer than is necessary to convert the iodide or other silver compound into sulphide. Only a few prints should be darkened at a time; each one can be placed face down and pushed under the solution. When about a dozen prints are immersed they may be turned face up one by one, and in two or three minutes after the image is darkened, as far as it will go, they must be removed one by one and placed in a fairly strong solution of alum, without

previous washing. They may remain in the alum solution until all are toned. The dish containing the prints is put under a stream of water, and the prints turned over and over, so that the alum solution is gradually washed away; a very short washing in water is then sufficient.

The method recommended above is the result of years of practical experience in an establishment where bromide prints form 99 per cent. of the output. There are probably many causes of blisters, but if the above method be adopted, not one print in a thousand will blister, if ordinary care is used in carrying out the process. Special stress must be laid on three points: first, an acid-fixing bath containing alum; second, drying prints before toning; and third, removal to an alum bath from the sulphide solution without washing. Sometimes a white deposit will appear on the surface of prints when dry, but a slight rubbing with a tuft of cotton wool moistened with methylated spirit will remove it.—*British Journal of Photography.*

LETTER FROM CHARLES W. JEROME.

OWATONNA, MINN., November 1, 1907.

Editor, Wilson's Photographic Magazine.

DEAR SIR: The enclosed notes are herewith submitted for your examination. The use of a hand mirror in the way described I hit upon recently. Country children are often so very shy that any device which will assist in getting an easy expression will be welcomed by the "man behind the camera."

Yours truly,

CHARLES W. JEROME.

In photographing young children it will often be found that their shyness makes it somewhat difficult for the operator to get a good expression. In such cases he may often resort profitably to the use of a hand mirror. By employing it he can face directly away from the little one and still observe all its expressions and movements, and press the bulb at the right moment.

From a former employer of mine I learned a useful device in handling sitters of a certain class that we occasionally meet with.

Now and then a subject will be found whose eyes, in spite of all that the operator can do, will begin to "bulge out of his head" as if in intensity of staring. This begins as soon as he looks steadfastly at any object, even a lead pencil or fountain pen that the operator takes out of his pocket, and the strained expression increases the longer he looks. One way to obviate this is to shake or gently sway, or move backward and forward, the object of his vision.

Sepia Platinum Prints. The use of zinc oxalate for obtaining warm brown tones with ordinary black platinum paper was first suggested by Dr. R. Jacoby. He now states that rich warm sepia tones can be produced by using the following developer:

Potassium oxalate	200 parts.
Ammonium phosphate	50 parts.
Copper sulphate	2 parts.
Water	1000 parts.

The prints should be left for at least five minutes in this, otherwise they lose a lot in the fixing bath.

WORK ROOM FORMULÆ.

A Developer Formula for Iris.—An enthusiastic user of Iris furnishes us with a developer formula, which after careful trial we can recommend. It is as follows:

Water	40 ounces.
Metol	14 grains.
Sulphite of soda (dry)	½ ounce.
Hydroquinone	90 grains.
Carbonate of soda (dry)	½ ounce.

When ready to develop add one drop of saturated solution of bromide of potash to each two ounces of developer. This formula will produce prints having a decided olive color, which is necessary if warm black tones are desired.

After prints are fixed, the decided olive is removed by toning, as directed in the working formula.

Positives Direct.—M. Balagny recommends the following modification of an old process for obtaining positives or negatives direct either in the camera or by contact printing. The exposed plate is developed with

Amidol	7 grains.
Sodium sulphite	21 grains.
Ammonium bromide	½ grain.
Sodium bisulphite lye	2½ minims.
Water	1 ounce.

When development is complete the plate should be thoroughly washed and exposed for thirty to forty-five seconds to diffused daylight. Then in the dark room it should be immersed in

Potassium bichromate	15 grains.
Nitric acid	6 minims.
Water	1 ounce.

This converts the silver image into silver chromate, which is dissolved out by a 10 per cent. solution of sodium sulphite plus 3 per cent. of acid bisulphite. The plate is then well washed, and nothing now remains but the exposed silver haloids, which are developed by the above-given developer minus the bromide.—*Photographic News.*

Sepia Prints.—The following formulæ are given in the *Photographische Industrie* for preparing home sensitized papers and postcards:

Gelatine	3 grains.
Tartaric acid	8 grains.
Ammoniocitrate of iron	40 grains.
Silver nitrate	6 grains.
Water	1000 c.c.

Printing should be carried on till the deepest shadows appear yellow, and the print then washed and fixed in a 1 per cent. solution of hypo. or treated with a weak combined toning and fixing bath. The second formula contains lead:

Ammoniocitrate of iron	5 grains.
Silver nitrate	1 grain.
Lead nitrate	1 grain
Tartaric acid	½ grain.
Water	60 c.c.s.

The treatment is as above. These should be useful for proof work.

Preparing Rough Paper for Carbon Transfers. The following method is applicable to all classes of paper: Take of Nelson No. 1 gelatine 4 ounces, and let it soak for two hours in 25 ounces of warm water; then melt over a slow fire in a water pan. Put the gelatine into a jar and set it in a pan of water over the fire and thoroughly dissolve, stirring it all the time; when dissolved add very slowly 60 grains of chrome alum, previously dissolved in 4 ounces of water. Stir all the time it is being added; this will solidify the gelatine. Collect and

restore it to fluidity with as much glacial acid as is necessary. Now take the sheet of paper to be coated ready for receiving the carbon tissue and pin it at all four corners on a board, and into the centre pour a good supply of the mixture; for an imperial sheet, say, 2 ounces. Take a brush and roughly go all over the paper with it; then take a flat squeegee and press it all over the paper, now backward, then crossway, so that all the paper receives a good coating, but leaving as little on the paper as possible, except in the case of rough papers, which require a more liberal treatment. All that is squeegeed off the paper may be gathered up and returned to the pot for further use. Two ounces will leave plenty to return to the pot, but it is better to be liberal with it at the start. Hang up the paper to dry, and it is then ready for use.

A Focal-plane Shutter should possess the following qualifications: Exposure of from $\frac{1}{20}$ sec. to $\frac{1}{1000}$ sec. should be possible. All movements connected with the working of the shutter should be smooth and as noiseless as possible; the slit or opening in the shutter should be alterable without having to remove the slide containing plates, and such alterations should be made on the outside of the instrument; the working parts of the shutter should be enclosed.

Photographs on Silk. Replying to an oft-repeated question, the following formulæ will give prints on silk. Martin's silk solutions, put up by Burke & James, however, are more reliable and considerable less trouble.

A.—Tannin	60 grains.
Distilled water	3½ ounces.
B.—Common salt	60 grains.
Arrowroot	60 grains.
Acetic acid	½ ounce.
Distilled water	3½ ounces.

Dissolve the arrowroot by the aid of gentle heat, add the remainder of the ingredients, mix the two solutions and filter. Immerse the fabric, which should be first washed to free it from all dressing, in this solution for three minutes and hang up to dry. When thoroughly dry, sensitize in a bath of

Nitrate of silver	50 grains.
Distilled water	1 ounce.
Nitric acid	½ drop.

Dry, print, and wash as usual for P.O. P., and tone in the sulphocyanide bath.

Stripping Gelatine Negatives. A. Methylated spirit, 1 oz.; water, 1 oz.; formalin, ¾ oz. To make stripping liquid (B) take A, 8 drm.; hydrofluoric acid, 1 drm. Cut negative all round about ⅛ in. from edge, set plate level, and cover with B. Strip off narrow bands of film at edges and gently raise film. If all is free, pour on A solution, lay piece of white paper on negative, and squeegee down. Remove film and paper together, lay on clean glass, squeegee and carefully remove paper.

Stripping from Glass or Celluloid (Roy's method). Harden negative in: Water, 10 oz.; formalin, 1 oz.; glycerine, 300 minims, for 10 minutes. Rinse till free from greasy appearance, and dry. Cut through gelatine at ⅛ in. from edge and place in soda carbonate solution (2 to 2½ oz. soda carb. cryst. per 10 oz. water) for fifteen minutes. Remove direct to: Hydrochloric acid, 50 minims; water, 10 oz. Film floats off in a minute or two, and is transferred to clean glass. Spread evenly thereon and lay a piece of moleskin over it and squeegee.

Enlarging by Stripping. Place in hydrofluoric acid, 1 fl. oz.; citric acid, 2 oz.; glycerine, 1 oz.; acetic acid, 4 oz.; water, 32 oz. Release film into clean water and squeegee on to clean plate.

Home-made Mountant. The following from Henry's *Early Work* is a favorite formula with the English professional photographer:

Bermuda arrowroot	3½ ounces.
Nelson's No. 1 gelatine....	160 grains.
Columbian spirits	2 ounces.
Pure carbolic acid	12 minims.
Cold water.....	30 ounces.

Mix the arrowroot into a stiff cream with two ounces of the water, while the gelatine is put to soak in the remainder. When the gelatine is softened and the arrowroot well mixed, pour all together into an iron (or enamelled) saucepan, and bring to the boiling point. Keep at this heat for five minutes, stirring continually *in one direction* from the moment the mixture is put on the fire. Pour into a basin to cool, and then add the carbolic acid and spirit (previously mixed) in a thin stream with constant stirring. Squeeze through muslin and keep in wide-mouthed jars.

TRADE NOTES.

THE FOLMER & SCHWING CO., of Rochester, N. Y., announce that they have an interesting and instructive set of lantern slides which they will be glad to loan to camera clubs, photographic societies, schools, and other organizations interested in photography. The slides will be ready some time in December, and clubs desiring the use of the collection are invited to correspond with the Folmer & Schwing Co.

LUXO—claimed to be the standard flash powder of the world—is being more and more used in galleries for ordinary daytime portraiture, and for helping out late afternoon sitings in the wintertime there is nothing like it. Most of the successful flashlight workers use Luxo exclusively. If you are not a satisfied user try a box—obtainable of any dealer or send to W. P. Buchanan, Philadelphia, sole agent, for circular of particulars.

THE ENSIGN FILM, imported into this country from England by G. Gennert, of New York, has very many good qualities to recommend it to roll-film users. The several spools we have used have given uniformly good results. They are fast and give plenty of gradation in the middle tones. Using a rodinal developer we got bright, clean negatives that showed high color-sensitiveness and a remarkable absence of halation. Try a spool in your pocket camera.

AUTOTYPE SPIRIT SENSITIZER will be specially appreciated by those using carbon tissue in small quantities and the occasional user. No special apparatus or drying-room is needed, and the operation is so rapid that the tissue can be printed from within a few minutes of sensitizing. The sample we tried worked very easily, the tissue being coated in the evening in an ordinarily lighted room, care only being taken not to get too close to the source of illumination; the resultant prints, on warm-black autotype tissue were highly satisfactory. The sensitizer comes in an eight-ounce bottle at fifty cents, including the "brush." Geo. Murphy, Inc., 57 E. Ninth Street, New York, are the agents for the Autotype Company's carbon-printing specialties.

FOR FINE PORTRAITURE AND PHOTO ENLARGEMENTS finished in water colors, crayons, pastels, and sepias, we have pleasure in recommending Mr. E. E. Giannin, of 338 East 17th Street, New York. We have seen his work, and photographers who are getting behind with their holiday work would do well to get into communication with Mr. Giannin. He can help you out with a good quality of work at reasonable prices.

NEW developers appear almost daily, with strange and wonderful names. The makers urge on their behalf that, the patents on many of the old and well-known developers having run out, there is no need to pay such high prices as formerly obtained. Photographers would do well to be sure that they are getting a better and cheaper developer before giving up the old one. In nine cases out of ten the cheaper developer will not be the better. Take the well-known "Agfa" Metol, perhaps the best and most universally used developer in existence. You can uy developers that are lower in price per ounce, but the test of cheapness is the result. With "Agfa" Metol you can get more brilliant, clean negatives than with any of the so-called cheaper developers. You can rely upon it every time, the quality is always the same—the best. In "Agfa" Metol and Hydroquinone you have a developer for plates, films, a id papers that produces the best results for the lowest cost.

TAYLOR, TAYLOR & HOBSON, LTD., of New York, are introducing a new Cooke portrait lens, Series IV, working at *f*/5.6, fitted with an ingenious diffusing and diaphragm control that will be of great interest to those photographers who desire to make artistic portraits. The illustration below gives a very good idea of the lens and attachment when fitted to the camera. Two

cords are brought to the back of the camera and the manipulation of one of the cords enables the operator to secure any amount of diffusion. The other cord operates the iris diaphragm and enables the operator to focus and adjust the diaphragm without having to pass in front of the camera. The many advantages of this arrangement will at once be apparent to the professional photographer, and we expect to see it readily adopted. The lens fitted with pulleys and cords sells, the 13-inch for $135.00; 16-inch, $190.00, and the 18-inch for $230.00.

RAISE THE QUALITY of your work and you can raise your prices. A good method of raising the quality is to use Angelo Sepia—the paper on which prize-winning prints are made. Your customers will be too well pleased with the results to raise any remark about the increase in the price.

THE GOODWIN FILM & CAMERA CO., of Binghamton, N. Y.—whose film factory was totally destroyed by fire in September last—have almost completed a fine new, concrete building, which, when finished and equipped, will be one of the most carefully planned film factories in existence. Films from the new plant are expected to be on the market early in January, and users of Ansco films will be glad to know that the company has shown such enterprise in building and equiping with special machinery, a large plant in an incredibly short space of time.

THE MIRMONT PHOTO PAPER CO., of Glendale, Brooklyn, N. Y., have just introduced a new bromide paper with a surface of pure linen texture on imported buff stock, coated with a soft, rich emulsion giving brilliant prints. The sample print sent us—an Oriental interior, 15 x 18, in a rich sepia tone, obtained by redevelopment—illustrates the possibilities of this paper. The slightly roughened surface gives to the picture a most pleasing soft effect and enhances the printing values of the negative. Send 50 cents for a trial dozen, 6½ x 8½ size, and you will be pleased with the results.

PORTRAITS ON POST CARDS FOR THE HOLIDAY TRADE.—There are so many photographers using post cards for portrait work, especially at this time of the year, in anticipation of the holiday trade, that a card coated with Professional Cyko emulsion, to produce soft prints from contrasty negatives, has been persistently urged on the manufacturers of Cyko, who announce that they are in a position to supply Professional Cyko cards of semi-matte surface, in boxes of 500 and 1000 cards only, at $8.50 per thousand, *net*. The cardboard will be the same as used for the regular Cyko card, *i. e.*, pure linen stock of standard weight and of the highest grade of texture and chemical purity. This card is not intended for those who consider price the only factor, but for those who wish to build up a reputation for quality and who have already learned from experience that in the post-card business the item of rejected prints enters more largely into the question of profit than the cost of the card. Cyko cards are uniform. They allow great latitude in printing and can be forced in development without staining of fogging. They produce soft and brilliant prints.

THE BRITISH JOURNAL ALMANAC, for 1908, is expected about December 12, and from advance notices we have received it is going to be an exceptionally good number. The new color-processes—Lumière's Autochrome, Warner-Powrie and others, will be dealt with in a very complete manner. The frontispiece will be a carbon print by the Autotype Company, and among other attractive inserts will be found a specimen of three-color printing by the Sanger-Shepard Color Co., etc. As the American edition is limited, it is advisable to place your orders now with your dealer or direct with Geo. Murphy, Inc., New York, American publishers.

EDITOR'S TABLE.

WITH this issue we close the forty-fourth volume of the magazine, and take the opportunity to thank our readers and subscribers for their continued good-will and support. We have endeavored to maintain the high standard set by the founder of the magazine, the late Edward L. Wilson, and the commendatory letters received from many of our old-time subscribers encourage us to think, that, in a measure, we have succeeded. During the coming year no effort or expense will be spared to make the magazine, if possible, more practical and helpful to the photographer. The present year—until the time of the financial panic, a few weeks ago—has been a very prosperous one for photographers, and should the money market reach normal conditions there is no reason why 1908 should not be another prosperous year. Subscribers whose subscriptions expire with this issue can help us greatly by making prompt renewal of their 1908 subscriptions.

Photograms of the Year 1907.—160 pages, 200 illustrations; paper covers, $1.00; cloth-bound, $1.50. Dawbarn & Ward, London; Tennant & Ward, New York, American publishers. This year's volume of *Photograms* is as good if not better than any of its predecessors. The illustrations are printed on an extra quality of coated paper, making it the best-printed annual we have seen this year. As a literary and pictorial record of the best photographs of the year it has no equal —reproducing, describing, and criticising about 200 pictures. In the British section the principal pictures exhibited at the Royal Photographic Society's Exhibition and the Salon are reproduced, with a critique by H. Snowden Ward. American work is very completely represented, with an essay on "Western Workers," by Fayette J. Clute. The French, German, Spanish, Canadian, and Australian work is well taken care of. The whole making a magnificent volume which no pictorial worker can afford to do without. The American professionals are represented by Curtis Bell, Joseph Byron, Alvin Langdon Coburn, E. S. Curtis, Rudolph Eickemeyer, Adelaide Hanscom, Meredith Janvier, Mrs. Gertrude Kasebier, Pirie MacDonald, Mrs. W. W. Pearce, D. D. Spellman, Clarence H. White, and W. H. Zerbe.

MR. SIDNEY ALLAN, whose articles on "Men and their Methods" have made such an attractive feature of the magazine, will begin in the January number a new series on *Composition in Portraiture*. It will no doubt be of interest to every photographer, what Mr. Allan has to say on the subject. He will stick strictly to such remarks and observations as can be applied to practical, professional photography.

"MR. AND MRS. W. F. SHULTZ extend to you a cordial invitation to attend the opening of their new studio at Gallatin, Missouri, Friday evening, October 20, 1907, from 8 to 11 P.M. Music and Art." This invitation, printed in old English text on fine note-paper and surmounted by a cleverly vignetted halftone view of a handsome studio surrounded by stately trees, made one of the neatest and most attractive invitations we have seen in some time. It is the best kind of advertising and we congratulate Mr. and Mrs. Shultz on their good taste and wish them much success in their new studio.

IN marked contrast to the above we received by almost the same mail, a handbill of which the substance was "25 unknown persons found dead . . . be wise, therefore, and secure a shadow before the substance Fades. 25 photos for 25 cents, by the Arkansas Photo Rig, which is coming to Mizpah, N. C. All styles and sizes up to date. Take your choice of best and better work. Ha! Ha! Free! Free! 25 photos of all persons over sixty-five years of age and all ministers free.

"P. S.—No work done on Sundays, so please don't ask me.

Your true photo friend,

MRS. JOHN DOE.

"Hurry! Hurry up."

We presume this did its work as well as the higher grade of stationery, under the circumstances, and we especially commend the lady for the firm stand she takes on the question of Sunday work, and would like to see it become much more general. The photographer is as much entitled to his day of rest as anyone else.

THE Photographers' Association of Wisconsin arranged to hold their twelfth annual convention at Milwaukee, April 28, 29, and 30, 1908.

The Illinois Association will hold their convention at Joliet, May 5, 6, and 7, 1908.

THE Illinois College of Photography, of Effingham, Ill., advise that a Bausch and Lomb Apochromatic Process Lens No. 840,851, Series No. 8; and a Goerz-Dagor Process Lens, No. 210,406 have been stolen from the college. In the event of these lenses being offered for sale to any photographer it is requested that he communicate with the Chief of Police of Effingham, Ill., or Mr. L. N. Bissell, of the same place. A reward of $25.00 is offered for the recovery of these lenses.

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